1. The formula microtubule centrioles:
A. /9x3/0*
B. /9x2/2
C. /9x3/3
D. /9x2/0
E. /9x3/2

2. In the process of cell division which occurs fold decrease in the number of chromosomes?
A. meiosis *
B. mitosis
C. amitosis
D. endomitosis
E. for all of the methods of division

3. What organelle is involved in intracellular digestion of substances?
A. lysosomes*
B. Golgi complex
C. the peroxisome
D. mitochondria
E. endoplasmic reticulum

4. What is a marker enzyme for peroxisomes :
A. catalase *
B. amylase
C. lipase
D. peptidase
E. phosphatase

5. The transfer of macromolecules through plasmolemma as a solution, colloid or suspension is carried out by:
A. pinocytosis *
B. phagocytosis
C. passive transport
D. active transport
E. exocytosis

6. Microtubules are composed of a protein:
A. tubulin *
B. actin
C. the keratin
D. elastin
E. myosin

7. Large formations consisting of protoplasm with many nuclei:
A. symplasts *
B. platelets
C. syncytia
D. cells
E. fibers

8. Presence of any organelle due basophilic of the cytoplasm of cells:

A. ribosomes*
B. microtubules
C. mitochondria
D. lysosomes
E. centrioles

9. What organelles are involved in the formation of spindle cells:
A. centrioles *
B. of the ribosome
C. endoplasmic reticulum
D. lysosomes
E. the Golgi apparatus

10. In which phase begins the formation of spindle:
A. prophase*
B. metaphase
C. anaphase
D. telophase
E. interphase

11. The stage at which the implantation of the embryo in the uterine wall:
A. of the blast cyst *
B. zygote
C. 2-cell stage
D. 4-cell stage
E. morula

12. Crushing different from mitosis:
A. lack of growth, nondisjunction daughter cells *
B. an increase in the size of the daughter cells
C. divergence of daughter cells
D. changing the number of chromosomes in the daughter cells
E. form a haploid sets of chromosomes in the cells

13. How many days after fertilization, the human embryo begins implanting into the uterus:
A. 7 days*
B. 5 days
C. after 10 days
D. 3 days
E. after 1 day

14. From the endoderm forms:
A. intestinal tube *
B. dermatome
C. sclerotome
D. chordal process
E. somites

15. Structural and functional unit formed by the placenta:
A. cotyledon*
B. trophoblast
C. chorionic villi

D. vessels of the villi
E. gap

16. Which of the following is derived from embryonic sources ectoderm?
A. ganglion plate *
B. somites
C. nefrotom
D. splanhnotom
E. dermatitis

17. A method of crushing a man:
A. complete, uneven, asynchronous *
B. asynchronous uniform, complete
C. goloblasticheskoe, uneven
D. complete, synchronous
E. incomplete, uneven

18. Which of the developing tissue derived from mesenchyme splanchnotome:
A. red blood cells *
B. striated muscle tissue
C. striated heart muscle tissue
D. epithelium viscera
E. skin epidermis

19. Type of human placenta:
A. gemohorial *
B. epiteliohorial
C. desmohorial
D. endoteliohorial
E. vazohorial

20. What are the only answer mesoderm derivatives?
A. somites, nefrotom, splanhnotom *
B. the epidermis and mesenchyme
C. the neural tube, nefrogonotom
D. splanhnotom, the wall of the yolk sac
E. the notochord, neural tube.

21. Acrosomal reaction occurs:
A. the selection of sperm hyaluronidase and trypsin *
B. the penetration of sperm into the egg
C. fusion of the nuclei of sex cells
D. the formation of the zygote
E. selection of egg hydrolytic enzymes

22. Sources of chorionic:
A. trophoblast, extraembryonic mesoderm *
B. embryonic knot
C. a piece of the parietal mesoderm
D. trophoblast and extraembryonic endoderm
E. extraembryonic ectoderm and trophoblast.

23. Plimbicary germ cells are formed:
A. to the endoderm of the yolk sac *
B. in the wall of the allantois
C. into the seminiferous tubules
D. in the ovaries
E. in the mesoderm of the yolk sac

24. Allantois - is:
A. digitule endoderm grow into the amniotic stem *
B. digital process ectoderm
C. villous proliferation of the trophoblast
D. elastic connective education
E. process mesoderm

25. Cortical reaction - is:
A. the formation of fertilization membrane *
B. splitting fertilization membrane
C. the destruction of follicular cells
D. fusion of the sperm with the egg
E. the penetration of sperm into the egg

26. Which structure is absent in the mature egg?
A. centrosome *
B. mitochondria
C. ribosomes
D. polysomes
E. lysosomes.

27. Initial streak during gastrulation is formed in the process:
A. immigration *
B. epiboly
C. intussusception
D. delamination
E. implantation

28. Which structure is located between the epithelium and the connective tissue :
A. basal membrane *
B. amorphous
C. collagen fibers
D. elastic membrane
E. an intermediate layer of cells

29. " edges " of the epithelial cells formed :
A. microvilli *
B. cilia
C. epitheliofibril
D. desmosomes
E. processes

30. Pseudostratified ciliated epithelium refers to :
A. single layer *

B. multilayer
C. flat stratum
D. a three-layer
E. to the cube

31. Stratified squamous epithelium not keratinizing found in :
A. oral *
B. bladder
C. the gallbladder
D. epidermis
E. trachea

32. Which answer is correct sequence of layers of the epidermis?
A. basal , prickly , granular , shining , horny *
B. basal , granular , prickly , shiny horn
C. the basal , shiny, prickly , granular , horny
D. basal , prickly , shiny, grainy , horny
E. basal , prickly , granular , horny , shiny .

35.The morphological classification exocrine glands is based on:
A. the structure of the ductless and secretory department *
B. the structure of the ductless
C. the structure of the end section
D. structure of cells ductless
E. the structure of the cell secretory department.

36. Which answer is correct listed species multi-row epithelium cells:
A. ciliated, intervening, slimy, endocrine *
B. basal granular, ciliated, limbic, goblet
C. ciliated, intervening, goblet, additional
D. ciliary, limbic, goblet, endocrine
E. ciliary, goblet, endocrine, main

37. Which genetic type is a single-layer columnar epithelium limbic:
A. enterodermal*
B. epidermal
C. tselonefrodermal
D. ependimoglial
E. angiodermal

38. What are the white blood cells can determine gender:
A. neutrophils*
B. basophils
C. eosinophils
D. lymphocytes
E. monocytes

39. The marker enzymes specific neutrophil granules are:
A. alkaline phosphatase *
B. acid phosphatase
C. arylsulfatase
D. peroxidase

E. beta glukuronidaza

40. Crystalloid structure found in specific grains:
A. eosinophils*
B. neutrophils
C. of basophils
D. neutrophils and basophils
E. all granulocytes

41. Leukocyte involved in the inactivation of the histamine:
A. eosinophil *
B. neutrophil
C. basophils
D. lymphocyte
E. monocyte

42. In which of the following bodies hematopoietic observed only in the embryonic period:
A. in liver
B. in the bone marrow
C. in the spleen
D. in the lymph nodes
E. in the thymus

43.The core of the majority of mature eosinophils is:
A. the two segments *
B. more than 10 segments
C. one segment
D. 3 segments
E. 4 or more

44. At what stage of erythropoiesis is being forced kernel:
A. oxyphilic normocytes *
B. erythroblasts
C. basophilic normocytes
D. proeritroblasta
E. polychromatic normocytes

45. The secondary granules of granulocytes appear during the following stages:
A. myelocyte *
B. metamyelocytes
C. mieloblasts
D. stem cells
E. promyelocytes

46. Stage granulocytopoiesis, which stops cell division:
A. metamielotsit *
B. myeloblast
C. progranulocyte
D. medullocell
E. segmented granulocyte

47. Osteon is:

A. the structural and functional unit of the tubular bones *
B. bone cells
C. intercellular substance bone
D. a source of bone tissue
E. osteogenic cell

48. Cells macrophagial system :
A. macrophages, Kupffer cells , osteoclasts , fibroklasts , microglia *
B. osteoclasts , fibroblasts , microglia cells , tissue basophile
C. macrophages , fibroblasts , plasma cells , lymphocytes
D. pericytes , Kupffer cells, osteoblasts , microglia
E. settled macrophages , basophils , lymphocytes, lymphoblast

49. Dense irregular connective tissue is in:
A. mesh layer of the skin *
B. bone marrow
C. cancellous
D. tendons
E. ligaments

50.The most typical plasma cells are organelles:
A. endoplasmic reticulum granular type *
B. ribosome, polysomes
C. the structure of the Golgi complex
D. mitochondria
E. lysosomes

51. List the most common cells of loose fibrous connective tissue
A. macrophages, fibroblasts, plasma cells, mast cells *
B. fibroblasts, pericytes, macrophages, pigmentotsits
C. adventitial cells, plasma cells, leukocytes
D. adipocytes , reticulocytes, pericytes
E. fibroblasts, endothelial cells, lymphocytes, adventitial cells

52. The most typical organelles of macrophages are:
A. lysosomes *
B. the type of granular endoplasmic reticulum
C. the structure of the Golgi complex
D. mitochondria
E. ribosomes, polysomes

53. The connective tissue cells that produce histamine and heparin:
A. fat *
B. fibroblast
C. macrophage
D. plasma cell
E. adipocyte

54. Classification of proper connective tissue is based on:
A. ratio of cells and intercellular substance *
B. the function performed
C. cellular composition

D. the composition of intercellular substance
E. the presence of fibers

55. The connective tissue cells non mesechyma origin:
A. pigment cells *
B. pericytes
C. adventitial cells
E. mast cells
D. fibroblasts

56. The growth of long bones in length is provided:
A. metaepiphyseal cartilage plate *
B. an increase in the intercellular substance
C. osteoblasts and osteocytes
D. a layer of fibrous periosteum
E. cell layer of the periosteum

57. The marker enzymes of fat cells:
A. gistidin dekarboksilaza *
B. alkaline phosphatase
C. acid phosphatase
D. peroxidase
E. cytochrome oxidase

58. Apposition cartilage growth is due to:
A. chondroblast *
B. chondrocytes
C. prehondrotsitov
D. groups of isogenic cells
E. perichondrium

59. Interstitial cartilage growth is ensured by
A. dividing chondrocyte *
B. division chondroblast
C. increase in the intercellular substance
D. stretching perichondrium
E. increasing the number of groups of isogenic cells .

60. Isogeneic group formed by:
A. chondrocytes *
B. chondroblast
C. two cells
E. prehondroblasts
D. osteoblasts

61. The classification of cartilage is based on:
A. the structure of the intercellular substance *
B. the location of the cartilage in the organs
C. their origin
D. the presence of fibrous structures
E. composed of cellular elements

62. The growth of long bones in thickness is provided by:
A. the periosteum *
B. metaepiphyseal cartilage plate
C. common external plates
D. internal records total
E. osteons

63. The bone cells with high alkaline phosphatase activity and a well-developed synthetic unit:
A. osteoblast*
B. osteocyte
C. osteoclast
D. osteocyte and osteoclast
E. fibroblast

64. In which there is no cartilage perichondrium?
A. to the cartilage of the joints *
B. in the cartilage of the trachea
C. into the cartilage of the ear
D. in the cartilage of the ribs
E. in the cartilage of the larynx

65. The connective tissue cells derived from blood monocytes:
A. osteoclast*
B. fibroblast
C. osteoblast
D. chondroblast
E. osteocyte

66. Heart muscle tissue develops from:
A. mioepikardial plate *
B. myotome
C. sclerotome
D. mesenchyma
E. nefrogonotoma

67. The sarcomere is limited:
A. Z-lines *
B. isotropic disks
C. anisotropic discs
D. N-zones
E. M-lines

68. Types of connections that are typical of the contractile cardiomyocytes:
A. interdigital, desmosomes, nexus *
B. interdigital, simple synaptic
C. tight, slit-like, simple
D. synaptic, desmosomes, slit
E. fingerlike, slit-like, simple

69. Myocytes with neural origin:
A. myocytes iris *
B. myoepitheliocytes

C. smooth muscle wall of the internal organs
D. contractile cardiomyocytes
E. conductive cardiomyocytes

70. Some of the sarcomere consisting of myosin and actin from partially, with M-linear middle.
A. anisotropic drive *
B. isotropic disk
C. telofragma
D. mesophragma
E. N-zone

71. Some of the sarcomere actin consisting of protofibrils in the middle which extends Z- line .
A. isotropic disc *
B. anisotropic drive
C. H - zone
D. telofragma
E. mesophragma

72. Located in the middle of an isotropic disc attached thereto actin protofibrils. What is the structure of the sarcomere matches this description ?
A. telofragme *
B. anisotropic disk
C. H - zone
D. mesophragma
E. T system

73. The beams are surrounded by muscle fibers:
A. pelimbicysium *
B. epimiziem
C. endomysium
D. sarcolemma
E. endotenoniem

74. The plot of the sarcomere, busy M-line and the adjacent zones, which houses the only myosin filaments, called:
A. N-stripe *
B. I-drive
C. A disk
D. telofragma
E. T-tubules.

75. The structural element of striated skeletal muscle tissue is:
A. muscle fiber *
B. myocyte cross-striped
C. the muscle fiber and myocyte
D. myoepithelial cells
E. cardiomyocyte.

76. What structures provide the smooth muscle calcium ions:
A. caveolae and vesicles *
B. pinocytic bubbles
C. mitochondria

D. smooth endoplasmic reticulum
E. lysosomes.

77. Intercellular substance of muscle tissue is represented by:
A. loose connective tissue *
B. adipose tissue
C. reticulum
D. satellite cells
E. of dense connective tissue

78. What is the cell corresponds to the following description - "fusiform shape, length 200-500 mm, thickness 5-8 mm, rod-shaped core, Located in the center, there is no transverse striations ":
A. smooth myocyte *
B. cardiomyocyte contractile
C. conducting cardiomyocyte
D. miosatellitotsit
E. mioepiteliotsit

79. Each skeletal muscle fiber is surrounded by:
A. endomysium *
B. pelimbicysium
C. epimiziem
D. endotenoniem
E. peritenoniem.

80. Free nerve endings consist of:
A. of finite branching axons *
B. branching axons and glial cells
C. in the axial cylinder surrounded by a connective tissue capsule
D. lemmotcytes
E. axons

81. Neuron T-shaped appendage fissile:
A. psevdounipolar
B. unipolar
C. bipolar
D. multipolar
E. neuroblast

82. Tigroid substance - is:
A. ribonucleoproteins*
B. fat inclusions
C. carbohydrate inclusions
D. the secretory granules
E. deoxyribonucleoproteins

83. Neuroglial cells with secretory function:
A. ependimogliotcytes *
B. protoplasmic astrocytes
C. fibrous astrocytes
D. microglia
E. oligodendrocytes

84. The nodes of Ranvier nerve fiber corresponds to:
A. border adjacent lemmotcite*
B. mezaxon
C. contact of nerve fibers
D. nucleated zone lemmotcite
E. digital contact lemmotcite

85. Mezaxonom is:
A. duplikatur plasmolemma lemmotcite*
B. lemmocite
C. duplikatur plasmolemma ependimotcite
D. derivative of microglia
E. duplikatur plasmolemma neurocyte

86. The ventricles of the brain and spinal canal lined with:
A. ependimotcytes*
B. astrocytes
C. oligodendrocytes
D. epithelium
E. microglia

87.In myelinated nerve fibers contain:
A. one axial cylinder *
B. 1-3 axons
C. many axons
D. a few axons
E. two axial cylinder

88. Spinal node is located :
A. along the dorsal root of the spinal cord *
B. along the anterior spinal roots
C. along the front and rear spinal roots
D. along the lateral horn of the spinal cord
E. a rear spermatic cord spinal cord

89. The dendrites of neurons of the spinal unit sent to:
A. composed of a mixed peripheral nerve receptors and form *
B. in the dorsal roots of the spinal cord to their own kernels
C. in the composition of mixed peripheral nerve and motor nerve form closure
D. in the center consisting of mixed nerve and synapse with neurons in the central
E. in the posterior horns of the spinal cord to effector neurons

90. Cerebellar afferents and their functions :
A. spread moss family and scansorial - excitation pulses *
B. spread moss family - braking , scansorial - stimulating
C. spread moss family - exciting , scansorial - inhibitory
D. and spread moss family scansorial - inhibitory impulses
E. only scansorial fiber transmit excitation pear-shaped cells

91. In its own nucleus of the spinal cord are :
A. associative neurons that connect the spinal cord to the cerebellum and

thalamus *
B. associative neurons linking the front and rear horn
C. sensory neurons that communicate with the spinal cord hypothalamus
D. motor neurons that connect the spinal cord with large crust hemispheres
E. associative neurons that connect the spinal cord with the cerebellum

92. Stellate neurons of the cerebellum with short neurites:
A. block excitatory impulses from mossy fibers *
B. cells transmit inhibitory impulses grains
C. transmit excitation pulses pear-shaped cells
D. block excitatory impulses from cells of the molecular layer
E. blocking the impulses from scansorial fibers

93. Outgrowth of spinal ganglion neurons are in:
A. the gray matter of the spinal cord through the dorsal roots *
B. the white matter of the spinal cord
C. the gray matter of the spinal cord via the lateral horn
D. through the rear side horns roots
E. gray matter through the front horn

94. In the front horn of the spinal cord are:
A. the medial and lateral nuclei somatomotor *
B. medial and intermediate nucleus
C. the intermediate and lateral nucleus
D. dorsal, medial and lateral nucleus
E. and medial dorsal nucleus sensitive

95. In the intermediate part of the spinal cord are distinguished:
A. the medial and lateral intermediate nucleus *
B. own medial and intermediate nucleus
C. dorsal, medial and lateral nucleus
D. own, dorsal, lateral intermediate nucleus
E. dorsal, lateral and own kernel

96. Ganglia intramural plexus include:
A. efferent, afferent neurons and associative *
B. and efferent neurons associative
C. receptor cells and associative local reflex arcs
D. and associative afferent neurons
E. long procession effectors neurons (the cell type I) and associative (type 3 cagE.

97. In the cerebellar cortex distinguish layers:
A. molecular, ganglionic, granular *
B. molecular, pyramidal, granular
C. the molecular, ganglionic, polymorphic
D. molecular, pear-shaped, pyramidal
E. the molecular, granular outer, inner granular

98. Sources of the ganglia of the autonomic nervous system :

A. ganglion plate *
B. of trunk neural tube
C. front brain bubble
D. endoderm
E. placode

99. What are the afferent fibers terminate directly on the pear-shaped cells of the cerebellum ?
A. lianoid *
B. spread moss family
C. spread moss family and lianoid
D. Golgi cell axons
E. axons of stellate cells

100. The main criterion, which is based on the classification of the arteries:
A. ratio of smooth muscle cells and elastic fibers *
B. localization of arteries in the body
C. the diameter of the arteries
D. the presence of internal elastic membrane
E. the availability of graduate elastic membrane

101. Intercalated disks match:
A. the border of the adjacent contractile cardiomyocytes *
B. the boundary of the adjacent conductive cardiomyocytes
C. in place of weaving myofibrils plasmolemma
D. section of the lateral connections between cardiomyocytes
E. zone of greatest congestion of glycogen

102. The source of the blood vessels:
A. blood islands of the yolk sac and chorionic wall *
B. the yolk sac
C. colon plimbicary mesenchymal cells
D. wall chorionic
E. mioepikardial plate

103. In large arteries vessels are located in:
A. the outer and middle shells *
B. the inner and middle membranes
C. the average shell
D. inner shell
E. in all three membranes

104. The efferent nerve endings in the capillaries end in:
A. pericytes *
B. pericytes and endothelial cells
C. adventitial cells
D. endothelial cells
E. basal membrane

105. The sinusoids are found in :
A. liver
B. kidney
C. the skin

D. muscle
E. intestine

106. In the veins of the weak development of muscular elements :
A. poorly expressed podendotelial layer in the middle of the shell
little myocyte *
B. There are no myocytes in the middle shell
C. is well developed podendotelial layer and little myocyte in the outer shell
D. a little myocytes in the media and well-developed outer shell
E. low myocytes in the outer shell , but they are available in the inner shell

107. The venous valves are formed :
A. venous intima*
B. the inner and middle sheath
C. layer podendotelial
D. all of the shells
E. smooth muscle cells

108. Gematotimic barrier formation involved:
A. capillary endothelium continuous and continuous basal membrane *
B. capillaries with pores in the endothelium
C. fenestrated capillaries
D. sinusoidal capillaries
E. capillaries have no basement membrane

109. Features of blood capillaries type II:
A. fenestrated endothelium, basement membrane is a continuous *
B. a continuous endothelium, basement membrane is discontinuous
C. has pores endothelium, basement membrane is discontinuous
D. continuous endothelium, basement membrane solid
E. fenestrated endothelium, the basement membrane is absent

110. The classification is based on the veins:
A. the degree of development of muscular elements *
B. relationship of muscle and elastic fibers
C. ratio of muscle and collagen fibers
D. the presence of valves
E. caliber and location in the body

111. Veins with the average development of muscular elements include:
A. shoulder *
B. femoral
C. inferior vena
D.) superior vena
E. veins of the meninges

112. In any arteries no internal elastic membrane?
A. elastic type *
B. muscular type
C. mixed type
D. arterioles
E. elastic and mixed type

113. Features of the structure of small lymphatic vessels:
A. there is no muscular elements *
B. not of valves
C. are cross-fold
D. no tunica
E. muscle elements only tunica

114. The main difference in the wall of the post-capillary venules collecting:
A. the presence of myocyte *
B. expressed in three shell
C. the absence of pericytes
D. absence podendotelial layer
E. not tunica

115. Pericytes in the wall of the capillary are located in:
A. disintegrations basement membrane *
B. the cracks of the basement membrane
C. endothelial layer
D. subendothelial layer
E. of the basal membrane

116. The structural features of the portal vein:
A. in the two layers of the tunica muscular fibers *
B. in the outer shell –circular myofibers
C. is the most developed outer shell
D. in all the shells of the longitudinal muscle fibers
E. when the inner shell - the thickening of the longitudinal bundles of muscle fibers

117. As part of the valve attaching the endothelium of lymphatic vessels, as well as:
A. elastic membrane, myocytes, connective plate *
B. collagen and elastic fibers
C. the internal elastic membrane and connective tissue
D. dense connective tissue, elastic fibers
E. smooth muscle cells

118. The effector cells in the lymph node are formed:
A. paracortical zone and brain strands *
B. cortex and paracortical area
C. paracortical area
D. paracortical area around the central sinus
E. paracortical zone sinuses

119. In utero human embryo bone marrow first appears:
A. to the collarbone *
B. in the flat bones
C. into the long bones of limbs
D. in the yolk sac
E. liver spleen

120. Determine the correct answer most defining feature thymus:
A. performs the reaction of cellular immunity and humoral immunity controls *

B. provides the cellular immune response
C. carries out the reaction of humoral immunity
D. the reaction is performed as a cellular and humoral immunity
E. provides antigen-differentiation of T lymphocytes

121. Open type circulation in the spleen is characterized in that:
A. open capillaries in the reticular fabric *
B. capillaries connect couplings
C. capillaries are opened in the sinuses
D. the capillary walls are thickened
E. capillary walls contain muscle cells

122. With insufficient education thymosin disturbed differentiation:
A. T lymphocytes *
B. monocytes
C. B-lymphocytes
D. macrophages
E. plasma cells

123. In the preparation of the body you can see a lot of lymphocytes, reticular skeleton, no lymphoid follicles:
A. thymus *
B. spleen
C. lymph node
D. red bone marrow
E. the tonsils

124. In the area of the lymph node periarterial spleen prevail:
A. T-lymphocytes, cells interdigitation *
B. reticular cells, plasma cells
C. plasma cells, cells interdigitation
D. lymphocytes, plasmocytes
E. T-lymphocytes, plasmocytes

125. Mantle zone limfofollikula spleen are found mostly:
A. small B-lymphocytes, macrophages, plasma cells *
B. plasma cells, megakaryocytes, fat cells
C. macrophages, lymphoblasts, megakaryocytes
D. T-lymphocytes, dendritic cells, monocytes
E. plasma cells, monocytes, dendritic cells

126. The accumulation of macrophages observed in the islands of the bone marrow, which are developing:
A. erythrocytes*
B. granulocytes
C. lymphocytes
D. monocytes
E. megakaryocytes

127. The number and size of cells in the thymus Hassall age:
A. increase *
B. decrease

C. decrease and disappear
D. disappear
E. does not change

128. The iron for hemoglobin synthesis erythroblasts comes:
A. macrophages *
B. reticular cells
C. adventitial cells
D. blood plasma
E. endothelial cells

129. Closed-type blood circulation in the spleen characterized in that:
A. in the capillaries open venous sinuses *
B. capillaries connect couplings
C. capillaries open in reticulum
D. the capillary walls are thickened
E. capillary walls contain muscle cells

130. In a reply given all structures providing lymph in the lymph node:
A. the edge sine intermediate sinus cerebral sinus *
B. brain sinus post-capillary vessels
C. the edge sinus venous sinus
D. in between sinus capillaries
E. boundary sinus outflow lymphatic vessel

131. Layered calf thymus is:
A. the accumulation of degenerated epithelial cells *
B. the accumulation of degenerated lymphocytes
C. the deposition of calcium salts
D. place the maturation of T-lymphocytes
E. plate tactile nerves

132. Specify the phrase concerning only the medulla of lymph nodes:
A. takes the proliferation and maturation of plasma cells *
B. bringing the lymphatic vessels flow into the marginal sinuses
C. arranged lymph nodules with a diameter of about 0.5-1 mm
D. center of breeding inhabited mainly lymphoblasts
E. thymus-dependent zone contains mainly T lymphocytes

133. The composition of the blood-thymic barrier consists of endothelial cells to the basement membrane, as well as:
A. macrophages pericapillary space epithelial cells, basal membrane*
B. macrophages, adventitial cells, connective tissue
C. reticulocytes, basal membrane, macrophages
D. pericapillary space reticulocytes
E. macrophages, cells retikuloepitelial

134. In the sinus of a lymph node occur following unfixed cells:
A. lymphocytes, plasma cells, macrophages, granulocytes, erythrocytes *
B. adipocytes, lymphocytes, plasmocytes
C. macrophages, lymphocytes, basophils tissue

D. red blood cells, lymphocytes, reticulocytes, adipocytes
E. granulocytes, macrophages, plasma cells, platelets

135. The glands of the skin are derived:
A. epidermis *
B. of the dermis of the skin
C. the epidermis and mesenchyme
D. mesenchyma
E. subcutaneous fat

136. A layer of the epidermis, containing eleidin:
A. shiny *
B. basal
C. granular
D. prickly
E. horny

137. The sebaceous glands in the structure and type of secretion:
A. simple alveolar branched holocrine *
B. simple straight tubular holocrine
C. complex alveolar merocrine
D. simple branched tubular apocrine
E. simple alveolar straight holocrine

138. In the basal layers of the epidermis and the thorny addition to epithelial cells are found:
A. melanocytes dendrocytes lymphocytes *
B. granulocytes, macrophages
C. melanocytes, macrophages
D. dendrocytes granular macrophages
E. melanocytes, stem cells, neutrophils

139. The strength of the skin is ensured by
A. reticular dermis *
B. of the epidermis
C. the papillary dermis
D. of subcutaneous fat
E. all of the layers

140. The shaft of hair is not any brain matter?
A. ovale*
B. long
C. bristly
D. long and bristly
E. bristly and vellus

141. The end section skin sweat glands are located in:
A. reticular dermis *
B. basal
C. granular
D. thorny
E. horny

142. A layer of the epidermis, containing keratin:
A. horn*
B. brilliant
C. granular
D. basal
E. schipovaty

143. A layer of the epidermis, containing keratohyalin:
A. granular *
B. basal
C. brilliant
D. prickly
E. horny

144. The wall of the excretory duct of the sebaceous glands is lined with epithelium:
A. stratified squamous *
B. a single layer of cubical
C. double-layered cube
D. single-layered prismatic
E. multilane

145. The sources of the skin:
A. the ectoderm and dermatitis *
B. endoderm and mesoderm
C. mesoderm and dermatitis
D. and mesoderm splanhnotom
E. and the ectoderm sclerotome

146. The nerve endings located in the sprout layer of the epidermis of the skin:
A. tactile discs *
B. tactile corpuscles
C. the end of the flask
D. plate calf
E. Ruffini corpuscles

147. By the structure of the sweat glands are:
A. simple unbranched tubular *
B. simple tubular branched
C. simple alveolar branched
D. complex alveolar-tubular
E. simple alveolar unbranched

148. The presence of any structures indicates the beginning of the process of keratinization in which layer of the epidermis is happening:
A. to the granular layer to the complex keratohyalin epitheliofibril *
B. complex of the horny layer of keratin with epitheliofibril
C. brilliant layer with complex eleidin epitheliofibril
D. brilliant layer with keratin complex epitheliofibril
E. prickly layer of keratin complex with epitheliofibril

149. The granular layer of the epidermis of the skin presented:
A. 3-4 layers of diamond-shaped cells *

B. a single layer of flat cells
C. 2-3 layers of prismatic cells
D. 3-4 layers of process cells
E. 2-3 layers of rounded or oval cells

150. In what layer of the skin located Meissner corpuscles?
A. papillary *
B. the epidermis
C. mesh
D. subcutaneous adipose tissue
E. when all the dermis

151. The characteristics of the cells thorny layer of the epidermis:
A. polygonal shape, have cytoplasmic processes, contain many tonofibrils *
B. Process cell cytoplasm containing secretory granules and epitheliofibril
C. elongated form, multiple organelles
D. polygonal shape contains basophilic granules and epitheliofibril
E. the circular shape, and contain pigment granules secretion

152. Clara cells in the airways:
A. involved in the degradation of surfactant *
B. is a modified macrophages
C. are located alone between alveolocytes
D. have cilia
E. are found in the epithelium of the large bronchi

153. What bronchus cartilaginous shell disappears?
A. bronchus small caliber *
B. lobar bronchus
C. the main bronchus
D. major bronchi
E. bronchi medium caliber

154. Blood supply of light:
A. is derived from the power of the bronchi of the arteries of the systemic circulation *
B. in the arterioles of the pulmonary circulation flowing arterial blood
C. into the capillaries of the alveoli enters the blood from the systemic circulation
D. fenestrated capillaries of the alveolar type
E. the pulmonary artery into the lungs bring oxygen-rich blood

155. The general plan of the structure of the digestive tube:
A. mucosa, submucosa, muscular and serous or adventitia *
B. mucosa, submucosa, serous
C. mucosa, muscle, adventitia
D. mucous, muscular and serous
E. mucosa, submucosa, and cartilage shell

156. All of the amygdala, a part of the pharyngeal lymphoepithelial rings:
A. palatine, pharyngeal, laryngeal, lingual, pipe *
B. pharyngeal, laryngeal, lingual, nasal
C. palatine, pharyngeal, lingual, pipe
D. palatine, nasal, lingual, pharyngeal, laryngeal

E. palatine, lingual, nasal

157. Proper cancer of the esophagus:
A. complex branched alveolar-tubular *
B. complex branched tubular
C. complex linear
D. Simple branched
E. are simple unbranched

158. Most of the cells of the pyloric glands are:
A. mucocytes *
B. endocrinocytes
C. serotsity
D. parietal cells
E. the main cell

159. Crescent in the salivary glands form:
A. protein cells *
B. mucosal cells
C. myoepithelial cells
D. protein and mucous cells
E. these cells

160. The cells forming tooth enamel:
A. ganoblast *
B. odontoblasts
C. dentinoblasty
D. cementoblasts
E. fibroblasts

161. The pulp enamel organ at the differentiated form:
A. enamel cuticle *
B. dentinoblasty
C. ganoblast
D. dental pulp
E. of the tooth cement

162. Epithelium intralobular ducts of the pancreas single layer:
A. cubic *
B. flat
C. cylindrical
D. prismatic
E. ciliated

163. Brunner's gland located:
A. into submucosa 12 duodenum *
B. in the submucosa of the ileum
C. jejunal mucosa
D. in the serosa of the colon
E. in the mucous membrane of intestine

164. Which cell cancer of the stomach fundus corresponds to the following description of "rounded shape, the cytoplasm oxyphilic contains intracellular secretory tubules and vesicles, numerous mitochondria":
A. parietal *
B. the main
C. extra
D. cervical
E. endocrine

165. At the end secretory units of salivary gland myoepithelial cells are located:
A. between the basement membrane and secretory cells *
B. between the basement membrane and the adjacent connective tissue
C. in the crevices of the basal membrane
D. various salivary glands are located differently
E. are found only in the excretory ducts

166. Epithelium striated ducts of the salivary glands:
A. simple columnar *
B. a single-layer cubic
C. stratified squamous
D. single-layer flat
E. double-sided cube

167. Specify the buds that do not have taste buds:
A. threadlike*
B. leaf
C. mushroom
D. fluted
E. all are

168. The tooth pulp consists of:
A. loose irregular connective tissue *
B. dense irregular connective tissue
C. reticulum
D. adipose tissue
E. nerve tissue

169. The main differences from the duodenum jejunum concern:
A. villi and glands *
B. gland and the tunica muscularis
C. villi and crypts
D. crypts and submucosa
E. cellular composition of the villi and crypts

170. PP-cells in the pancreas is controlled:
A. secretion of gastric and pancreatic juice *
B. secretion of gastric juice
C. pancreatic juice secretion
D. secretion duodenal glands
E. bile

171. The epithelium of the gallbladder:

A. high prismatic limbic *
B. flat
C. cubic
D. prizmatic
E. pseudostratified ciliated

172. A large number of crypts in the colon occur:
A. goblet cells *
B. the main cell
C. M-cells
D. endocrinocytes
E. Paneth cells

173. Choose the correct statement about blood flow in the liver:
A. interlobular blood from the veins and arteries enters the sinusoid *
B. of the sinusoidal blood enters the interlobular vein
C. smooth muscle cells of the central veins contain adrenergic receptors
D. blood flows away from the liver by the portal vein
E. through the gates of the liver include hepatic veins

174. Disse space limit:
A. endothelial cells and hepatocytes *
B. hepatocytes and Ito cells
C. adjacent strands of hepatocytes
D. adjacent hepatocytes
E. the endothelial cells and Kupffer cells

175. In the crypts of the small intestine contains the following cells:
A. limbic, Paneth, nonlimbic cells, goblet, endocrine *
B. mucous, limbic, goblet, Paneth
C. endocrine, Paneth, goblet, secretory
D. limbic endocrine, goblet, basal
E. limbic, goblet, ciliated, cambial

176. Auerbach's plexus in the wall of the gastrointestinal tract is located:
A. between the layers of the muscle membrane *
B. in the submucosa
C. into the lamina propria
D. between the layers of muscle plates
E. between the mucosa and submucosa

177. In any salivary glands are serous crescent:
A. the submandibular and sublingual *
B. of the parotid and sublingual
C. the submandibular and parotid
D. only in the parotid
E. in all three glands

178. The regeneration of the epithelium of the small intestine stimulates:
A. epidermal growth factor *
B. gastrin
C. serotonin

D. somatostatin
E. peptide vazointestinalny

179. Avilable atsinoinsulyarnyh cells of the pancreas:
A. the presence of zimogen and endocrine granules *
B. very large
C. a very small size
D. the presence of large secretory cells
E. located in the outlet duct

180. The structure of a shell different various departments of the pharynx:
A. mucosa*
B. submucosa
C. muscle
D. serous
E. adventitia

181. In the electron diffraction pattern which cells of the stomach can be seen well-developed granular endoplasmic reticulum and Golgi complex in the apical part of numerous zymogen granules:
A. a main cell *
B. epithelial cell
C. extra cell
D. cervical cell
E. parietal cells

182. Indicate the most accurate list of cells in a part of the taste buds language:
A. epiteliosensornye, supporting, basal *
B. epiteliosensornye, connective tissue, basal
C. neurosensory, supporting, basal
D. neurosensory, supporting, intervening
E. receptor and supporting

183. The end sections of Brunner's gland cells meet the following:
A. mucous, goblet, Paneth cells, endocrine, parietal *
B. mucous, endocrine, columnar, goblet
C. serous, goblet, endocrine, limbic
D. Paneth cells, goblet, endocrine, limbic
E. nonlimbic cells, Paneth cells, endocrine, goblet

184. In the electron diffraction pattern of the small intestine is visible cell with a well-developed granular endoplasmic reticulum and the Golgi complex, in the apical cytoplasm containing granules electrondense:
A. Paneth cells *
B. goblet cells
C. endocrine cells
D. nonlimbic cells enterocyte
E. limbic enterocyte

185. M cells and beam cells found in the small intestine:
A. Peyer's patches in the epithelium *
B. in the lamina propria
C. on the basis of the villi

D. in the middle portion of the crypts
E. at the bottom of the crypts

186. Centroatsinoz pancreatic cells - this epithelium
A. intercalated ducts *
B. interlobular excretory ducts
C. of the main duct
D. acini
E. cells are combined

187. What kind of crypt cells correspond to the following description: "Low prismatic, thin brush border, basophilic cytoplasm, many free ribosomes are able to divide"
A. columnar enterocytes *
B. goblet cells
C. Paneth cells
D. endocrine cells
E. cambial cells

188. The structural and functional unit of the pancreas:
A. acinus*
B. alveoli
C. slice
D. follicle
E. segment

189. Buds, reducing adult:
A. leaf *
B. threadlike
C. mushroom
D. fluted
E. conical

190. Endocrine cells in the salivary glands located:
A. striated duct wall *
B. in the end regions of secretory
C. in the wall of the gusset ducts
D. in the wall of the interlobular ducts
E. are found in all of these structures

191. The end section of their own glands of the esophagus are composed of:
A. mucosal cell *
B. serous and mucous cells
C. endocrine cells
D. coating and endocrine cells
E. serous cells

192. Power dentin is performed by:
A. the system of tubules *
B. odontoblasts
C. predentin
D. the basic substance
E. interglobulyarnogo space

193. Joint secretion in the pancreas have:
A. atsino-islet cells *
B. centroatsinoz cells
C. endocrine cells
D. the acinar cells
E. goblet cells

194. The epithelium of the intermediate zone of the rectum:
A. stratified squamous not keratinizing*
B. simple columnar limbic
C. multilayer cubic
D. pseudostratified prismatic
E. single-layer cubic

195. These cells are involved in the reabsorption of water and urine concentration are vasopressin receptors:
A. cells collecting ducts *
B. proximal tubular cells
C. the cells of the distal tubules
D. cells downstream of the loop
E. cells of the ascending loop

196. The Department of nephron cells that reabsorb sodium, have aldosterone receptors:
A. distal tubule *
B. proximal twisted tubule
C. the loop of Henle
D. collecting tubes
E. proximal tubule straight

197. Which structures prevalent in proximal tubule cells?
A. mitochondria, lysosomes, vesicles pinocytic *
B. granular endoplasmic reticulum, Golgi complex
C. ribosome complex Golgi
D. of the smooth endoplasmic reticulum, Golgi complex
E. granular endoplasmic reticulum, mitochondria

198. The platelet-activating factor is synthesized in the kidney:
A. mesangial cells*
B. juxtaglomerular cells
C. interstitial cells
D. jukstavaskular cells
E. podocytes

199. Urine acidification is carried out:
A. intercalated cells sobiratelnh tubes *
B. the main cell sobiratelnh tubes
C. cells the loop of Henle
D. cells straight portion of the distal
E. cells proximal part

200. Kidney synthesized following active substances:
A. renin, prostaglandins, erythropoietin *
B. renin parathyrin, vasopressin
C. erythropoietin parathyrin, vasopressin
D. somatostatin, renin, leykopoetin
E. antidiuretic hormone, renin, erythropoietin

201. Location yukstavaskulyarnyh kidney cells:
A. between the arterioles and distal nephron *
B. the inner shell afferent and efferent arterioles
C. tunica afferent and efferent arterioles
D. outer shell afferent and efferent arterioles
E. wall of the distal

202. The thin loop of the nephron is lined with a single layer:
A. squamous epithelium *
B. a cubic epithelium
C. prismatic epithelium
D. the limbic epithelia
E. mucociliary

203. The central part of brain ray in the kidney is:
A. collecting tubes *
B. interlobular artery
C. afferent arterioles
D. loop of Henle
E. straight venule

204. The cells of kidney tubules, ultrastructure of parietal cells resemble fundic glands of the stomach:
A. dark cells collecting ducts *
B. proximal tubular cells
C. fine cells of the nephron
D. cells of the distal tubules
E. bright cell collecting tubules

205. The peculiarity of the tubules of the nephron cells distal to proximal contrast:
A. there is no brush border *
B. there is a basal striation
C. Not expressed basal striation
D. attaching the brush border
E. few mitochondria in the folds plasmolemma

206.Osobennosti structure of interstitial cells of the kidney:
A. processes, osmiophil pellets *
B. basal striation
C. lipidne on and brush border
D. and a plurality of brush border processes
E. a lot of mitochondria and basal striation

207. Renal prostaglandin apparatus includes:
A. and interstitial cells of collecting tubules nephrocytes *
B. Gurmagtiga cells, interstitial cells, epithelial cells distal tubule

C. juxtaglomerular cells, podocytes
D. mesangial cells, podocyte cells Gurmagtiga
E. interstitial cells juxtaglomerular cell

208. The secretory phase of urine formation is carried out:
A. collecting tubes *
B. proximal tubules of the nephron
C. of the renal corpuscles
D. of the distal tubule
E. the loop of Henle

209. The cells that produce extracellular matrix renal glomerulus:
A. mesangial*
B. fibroblasts
C. macrophages
D. podocytes
E. interstitial

210. Seminiferous epithelium of any tract consists of high columnar cells with cilia and low cubic cells with microvilli:
A. efferent tubules *
B. straight tubule
C. rete testis
D. duct of the epididymis
E. vas deferens

211. Where is the final differentiation of spermatozoa?
A. to the epididymis duct *
B. in the seminiferous tubules
C. into the efferent tubules
D. in the vas deferens
E. in the straight tubules

212. Choose the correct answer from the sequence of periods of spermatogenesis
A. reproduction, growth, maturation, formation *
B. formation, growth, multiplication, maturation
C. copying, formation, growth, maturation
D. reproduction, growth, formation, maturation
E. growth, reproduction, maturation, formation

213. The formation of sperm occurs:
A. to the convoluted tubules of the testis *
B. in the straight tubules of the testis
C. in the network testis
D. in the convoluted and straight tubules
E. In all these tubules

214. The reproduction of spermatogonia in the testes is done by:
A. mitosis*
B. amitosis
C. meiosis
D. and meiosis and mitosis

E. spermatogonia do not breed

215. What are the cells in the testes called sustentotcytes?
A. supports cells *
B. glandulotsity
C. spermatogenic cells
D. fibroblast cells
E. cambial cells

216. The cells that synthesize Müller (paramezonefral) inhibitory factor:
A. Sertoli cells *
B. Leydig cells
C. plimbicary sex cells
D. neurosecretory cells of the hypothalamus
E. gonadotropic cells of the adenohypophysis

217. The androgen-binding protein secreted by:
A. Sertoli cells *
B. Leydig cells
C. the seminal vesicles
D. prostate
E. bulbourethral gland

218. Prostate gland structure are:
A. complex alveolar-tubular *
B. simple tubular
C. simple alveolyarnymi
D. branched tubular
E. complex alveolyarnymi

219. The endocrine cells of the testis are located:
A. in the interstitium*
B. a fiber layer
C. into the septum of the testis
D. in the layer mioidnom
E. in the layer of spermatogonia

220. Choose the most complete answer about the functions of Sertoli cells:
A. trophic, transportation, barrier, phagocytic *
B. the support, trophic, secretory, phagocytosis
C. stimulation of spermatogenesis, trophic
D. support, trophic, endocrine
E. trophic lysis spermatogenic cells, endocrine

221. The wall of the seminal vesicles consists of the following layers:
A. mucous, muscular and adventitia *
B. mucosa, submucosa and muscle
C. the mucosal, submucosal, muscular and adventitia
D. mucous, muscular and serosal
E. the mucosal, submucosal, muscular and serosal

222. Tubule epithelium direct testicles:

A. single-layer cylindrical *
B. a single-layer flat
C. monolayer cubic
D. single-layer multi-row
E. double row prismatic

223. View of the duct epithelium of the epididymis:
A. double row *
B. a single-layer flat
C. multi-row ciliated
D. simple columnar
E. single-layer cubic

224. Select the correct list of varieties of duct epithelial cells of the epididymis
A. prismatic, basal, intercalary *
B. cylindrical, cup-shaped, glandular
C. cylindrical, basal, limbic
D. ciliated, basal, goblet
E. cube, basal, goblet

225. The period of growth stimulates oogenesis:
A. follitropin *
B. progesterone
C. prolactin
D. luteinizing hormone
E. somatotropin

226. Building type of uterine cancer:
A. simple tubular linear *
B. simple alveolar straight
C. simple alveolar
D. complex alveolar-tubular
E. simple branched tubular

227. The components of the clear covering of the ovary to follicle secreted:
A. follicular cells and oocytes *
B. oocytes and luteal cells
C. luteal cells and follicular cells
D. oocytes and interstitial cells
E. the interstitial cells

228. The sources of the breast:
A. epidermis and mesenchyme *
B. somites, the ectoderm
C. dermatome, myotome
D. mesenchyme splanhnotom
E. endoderm, dermatitis

229. The white body is formed in the ovary:
A. on the site of the corpus luteum after involution *
B. as a result of atresia of the follicle
C. on the site of a mature follicle after ovulation

D. in the medulla
E. in place atretic follicle

230. The cervical canal is lined with:
A. single-layer cubic epithelium *
B. a single-layered prismatic epithelium
C. simple squamous epithelium
D. two-layer epithelium
E. dual inline epithelium

231. What is the corpus albicans in the ovary:
A. body formed on the site of the follicle and the lost egg *
B. the involution of the corpus luteum
C. a body formed in situ bubble Graafova
D. ovarian atrophy
E. the metamorphosis of the corpus luteum

232. Factors support bleeding in the menstrual phase of the sexual cycle:
A. the cessation of progesterone secretion, the endometrial ischemia, necrosis *
B. mucosal ischemia, thrombosis, cessation of secretion of uterine glands
C. direct arterial spasm, hypoxia, necrosis
D. enhance the secretion of thrombosis
E. enhance the secretion of necrosis

233. In any phase of the menstrual cycle secrete uterine cancer:
A. premenstrual phase *
B. phase posmenstrualnaya
C. resting phase
D. phase of the menstrual
E. in all phases

234. Identify the correct sequence of stages of development of the corpus luteum:
A. proliferation and vascularization, glandular metamorphosis, blossoming, involution *
B. vascularization, the flourishing, glandular metamorphosis
C. proliferation, flourishing, glandular metamorphosis
D. proliferation, the formation of lutein cells, involution
E. glandular metamorphosis proliferation, blossoming, involution

235. The main hormones that regulate the function of the lactating mammary gland:
A. prolactin, oxytocin *
B. prolactin
C. luteinizing hormone
D. estrogen and prolactin
E. progesterone liberiny

236. corpus albicans in its structure comprises a transparent shell, connective tissue and
A. interstitial cells *
B. teckal cells
C. decidual cells
D. follicular cells
E. epithelial cells

237. The epithelium lining the fallopian tubes:
A. simple columnar *
B. a single-layer cubic
C. single-layer flat
D. layered not keratinizing
E. multi-row

238. In mature ovarian follicles are formed:
A. estrogens and gonadokrinin *
B. estrogen and lutein
C. follicle stimulating hormone folliculin
D. follitropin progestron
E. progesterone and estrogen

239. The corpus luteum. Indicate the correct answer:
A. as a result of involution in blood progesterone concentration falls *
B. is developed on the site of atretic follicles
C. cells of the corpus luteum - modified cells tunica
D. is an exocrine and endocrine
E. under the influence of human chorionic gonadotropin undergoes involution

240. When hypothyroidism in the pituitary gland structure changes:
A. tireotropotcytes*
B. mammotropotcytes
C. gonadotropotcytes
D. somatotropotcytes
E. kortikotropotcytes

241.Spongiotsity cells is:
A. of the adrenal zona fasciculata *
B. glomerular zone of the adrenal gland
C. netted area overkidney gland
D. medulla
E. sudanofob area

242.Teltsa Herring is:
A. terminals of neurosecretory cells of the anterior hypothalamus *
B. nerve endings in the endocrine glands
C. nerve terminals in the adenohypophysis
D. layered calf thymus
E. palpable calf in the thyroid gland

243. Sudanophob form of adrenal gland is located between:
A. glomerular beam zones *
B. glomerular and mesh zones
C. mesh and brain areas
D. beam and mesh zones
E. cortical brain areas

244. Which endocrine gland found brain sand:
A. epiphysis *
B. neurohypophysis

C. adenohypophysis
D. the hypothalamus
E. adrenal medulla

245. In any adenohypophysis largest cell functional activity manifests itself in the early postnatal period?
A. somatotropic *
B. thyritropic
C. kortikotrop
D. basophilic
E. gonadotropin

246. How does the pituitary cells corresponds to the following structure: "irregularly shaped lobed nucleus, many mitochondria, granular endoplasmic reticulum, limbicd granules":
A. kortikotropotcytes*
B. mammotropotcytes
C. tireotropotcytes
D. gonadotropotcytes
E. somatotropotcytes

247. As part of the interfollicular islands thyroid contains:
A. lymphocytes, mast cells, plasma cells, macrophages, B cells C *
B. plasma cells, lymphocytes, macrophages
C. C-cells thyrocytes, macrophages
D. lymphocytes, fibroblasts, mast cells
E. C-cells, lymphocytes, neutrophils, thyrocytes, plasmocytes

248. Variations endocrine parathyroid cells differ from each other mainly:
A. the number of mitochondria and endoplasmic reticulum granular *
B. granules amount ribosomes
C. the amount of free ribosomes
D. the presence of granular endoplasmic reticulum
E. the number of mitochondria and lysosomes

249. The endocrine cells of the adrenal gland are arranged in parallel rows, contain large amounts of smooth endoplazmatic network, a plurality of lipid droplets secrete:
A. glucocorticoids *
B. oxytocin
C. catecholamines
D. mineralocorticoid
E. calcitonin

250. For what cancer is detected anterior pituitary tropic hormones?
A. parathyroid *
B. of the ovary
C. of the adrenal cortex
D. thyroid
E. of the testis

251. The target cells for thyroid-stimulating hormone:
A. cells that synthesize iodine-containing hormones *
B. C cells of the thyroid gland
C. the cells that synthesize parathyrin

D. chromaffin cells of the adrenal glands
E. cells synthesizing glucocorticoids

252. The synthesis of glucocorticoids in the adrenal glands stimulate:
A. ACT, corticotropin *
B. thyroid-stimulating hormone, somatoliberin
C. GnRH, antiopeptin
D. angiotensin II, ACT
E. tireoliberin, neyrofiziny

253. Hormones produce steroid nature:
A. cells of the zona fasciculata of the adrenal glands *
B. chromaffin cells of the adrenal glands
C. acidophilus cells of the adenohypophysis
D. thyrocytes
E. B cells of islets of Langerhans

254. The sources of the pituitary gland:
A. ectodermal epithelium and neuroglia *
B. the neural tube
C. placode and mesenchyme
D. neural crest and endoderm
E. and chromaffin tissue neuroglia

255. The rod outer segments contain:
A. rhodopsin *
B. melanin
C. iodopsin
D. lipofuscin
E. melatonin

256. The outer segments of cone cells contained
A. iodopsin *
B. rhodopsin
C. melanin
D. lipofuscin
E. melatonin

257. Place of visual stimuli sweet spot
A. central macular fovea *
B. the blind spot
C. the optic disk
D. yellow spot
E. peripheral portion of the macula

258. The protein contained in the composition of the vitreous eye
A. vitrein *
B. dynein
C. elastin
D. heparin
E. eleidin

259. The photoreceptor cells of the retina are
A. neurosensory *
B. epiteliosensory
C. neurosensory cones, sticks epiteliosensory
D. epiteliosensory cones, sticks neurosensory
E. epithelial

260. The main groups of cells of the spiral organ of the ear
A. sensor supporting *
B. sensor, basal
C. sensor supporting, basal
D. support, basal
E. cell poles, basal

261. The hair cells of the macula are distinguished by
A. kinocilia *
B. stereocilia
C. microvilli
D. flagella
E. of the cilia

262. The muscles of the iris origin are
A. neural *
B. epidermal
C. mesenchymal
D. somatic
E. coelomic

263. A layer of the choroid, which lies on the border with the sclera:
A. overvessel plate *
B. vascular plate
C. vascular capillary plate
D. basal complex
E. it does not border with the sclera

264. Front epithelium of iris:
A. single-layer flat *
B. a single-layer cubic
C. simple columnar
D. layered nonsquamuos
E. single-layer, double-row

265. Tunnel of Corti in the cochlea is formed by:
A. columnar cells *
B. phalanx cells
C. supporting cells
D. internal sensory cells and basilar membrane
E. outer supporting cells and the basement membrane

266. The stapes transmits sound vibrations:
A. through the oval window in the vestibular ladder *
B. through the oval window into the cochlear canal

C. through the oval window into the scala tympani
D. through the round window in the vestibular ladder
E. through the round window into the scala tympani

267. View of the auditory epithelium of the tube:
A. multi-row ciliated *
B. a single-layer cubic
C. Simple columnar
D. layered nonsquamuos
E. single-layer flat

268. Contact photoreceptor cells with ganglion cells osushestvlyaetsya through:
A. bipolar associative cells *
B. horizontal cells associative
C. amacrine cells associative
D. all 3 kinds of associative cells
E. glial cells

269. The inner surface of the eardrum covered
A. simple squamous epithelium *
B. endothelium
C. stratified squamous epithelium nonsquamuos
D. two-layer epithelium
E. a single layer of cuboidal epithelium

270. The function of Schlemm's canal eyeball:
A. the fluid outflow from the anterior chamber *
B. the outflow of tear fluid
C. membranes vascularization
D. update the vitreous
E. the power of the anterior part of the retina

271. The basis of the epiglottis is:
A. elastic cartilage *
B. hyaline cartilage
C. fibrocartilage
D. dense connective tissue decorated
E. loose fibrous connective tissue unformed.

272. Epitely vestibule nose cavity:
A. multi-row cylindrical ciliated*
B. single layer ciliated cubic
C. layered ciliated cubic
D. stratified squamous
E. layered cylindrical

273. Pulmonary acinus:
A. respiratory bronchioles, alveolar ducts and alveolar sacs * B. one terminal bronchioles and two respiratory
C. a group of terminal bronchiole
D. alveolar ducts and alveolar sacs vestibule
E. terminal bronchioles, alveolar ducts, alveolar sacs.

274. Fibrous-cartilaginous membrane of the bronchi medium caliber consists of:
A. cartilage islands *
B. cartilage plates
C. is not closed cartilaginous rings
D. closed the cartilaginous rings.
E. cartilaginous plates and half-rings

275. The structural and functional unit of the respiratory department is easy:
A. acinus*
B. slice
C. segment
D. follicle
E. alveolus

276. Curfaktant synthesized:
A. alveolocytes type 2 *
B. alveolocytes type 1
C. limbic cells
D. macrophages
E. goblet cells

277. The enzyme cleaves surfactant produce:
A. alveolocytes type 1
B. alveolocytes type 2
C. the brush cage
D. secretory cells (ClarA. *
E. goblet cells.

278. The structure of the aero-hematic barrier include:
A. alveolocytes type 1 *
B. alveolocytes type 2
C. alveolocytes type 3
D. secretory cells (Clara)
E. goblet cells.

279. Chemoreceptor function is performed:
A. alveolocytes type 1
B. alveolocytes type 2
C. the brush cage *
D. secretory cells (Clara)
E. goblet cells

300. Artery veins and mucosa of the nasal cavity are different:
A. the severity of the tunica *
B. have special
C. expression of the inner shell
D. the severity of the outer shell
E. does not have a muscular coat

301. Terminal bronchiole diameter is:
A. 0.5 mm *

B. 1 mm
C. 2mm
D. 2,5 mm
E. 1.5 mm

302. Wall trachea is:
A. mucosa, submucosa, fibro-cartilage and adventitia shells *
B. mucous, fibrous cartilage and adventitia shells
C. the mucosa, submucosa and adventitia shells
D. mucosa, submucosa, fibro-cartilage and muscle membranes
E. the mucosa, submucosa, muscular and adventitia shells.

303. Epidermis develops from:
A. ectoderm *
B. myotome
C. dermatome
D. sclerotome
E. endoderm.

304. Actually skin develops from:
A. dermatome*
B. sclerotome
C. plate mioepikardial
D. endoderm
E. ectoderm.

305. Eleidin contained in the cells:
A. shiny layer *
B. the stratum corneum
C. the basal layer
D. spinous layer
E. of the granular layer.

306. In the papillary dermis are missing:
A. keratinocytes*
B. macrophages
C. tissue basophils
D. fibroblasts
E. of smooth muscle cells.

307. Positive enzyme reaction to give DOPA oxidase:
A. melanocytes *
B. keratinocytes
C. cells Largengansa
D. T lymphocytes
E. Merkel cells

308. The sebaceous glands in the structure are:
A. simple alveolar branched *
B. simple tubular branched
C. simple unbranched tubular
D. complex alveolar-tubular

E. simple alveolar unbranched

309. The end section merokrinovyh sweat glands are distinguished:
A. secretory cells and myoepithelial cells *
B. the secretory cells and the support cells
C. secretory cells and ciliated cells
D. excretory secretory cells and cells
E. secretory cells.

310. The sebaceous glands secrete by:
A. holocrine type *
B. merocrine type
C. mikroapocrine type
D. makroapocrine type
E. merocrine apocrine type

311. Source development final kidneys:
A. Renal tissue *
B. metanephridia
C. 25 pairs of segmented legs mesoderm
D. mezonefral duct
E. protonephridia

312. Renin is synthesized:
A. juxtaglomerular cell *
B. interstitial cells
C. cells collecting tubules
D. cells tight spot
E. podocytes

313. Filtration barrier. Select the incorrect statement:
A. glomerular capillaries sinusoidal type *
B. lies on the endothelial basement membrane sandwich
C. podocytes have cytotrabekular
D. fenestrated capillary endothelium type
E. the pressure of the blood in the capillaries of the glomerulus high

314. The cells synthesize prostaglandin:
A. interstitial *
B. juxtaglomerular
C. mesangial
D. jukstavaskular
E. jukstamedular

315. Optional regulates the reabsorption of sodium:
A. aldosterone *
B. oxytocin
C. vasopressin
D. angiotensin
E. renin

316. Main cellular elements loose irregular connective tissue:

A. fibroblasts, macrophages *
B. fibroblasts, bazophillic
C. lymphocytes, monocytes
D. neutropenia, macrophages
E. macrophages, plasma cells

317. In dense connective tissue is executed:
A. tendon *
B. net dermis
C. papillary dermis
D. hypoderm
E. retina

318. In mature fibroblasts are well developed:
A. granular endoplasmic reticulum
B. lysosome, peroxisome
C. mitochondria epitheliofibril
D. smooth endoplasmic reticulum
E. vakuolly and myofibrils

319. The main function of plasma cells:
A. produce immunoglobulin *
B. synthesis of heparin histamine
C. phagocytosis
D. synthesis amarfnogo substances and fibers
E. production of hormones

320. The cells produce heparin and histamine:
A. mast cells *
B. macrophages
C. adipocytes
D. fibroblasts
E. melanocytes

321. T-dependent area lymph node:
A. paracortex *
B. lymphoid follicles
C. brain cords
D. brain sinuses
E. parafollicular zone

322. The blood-thymic barrier form:
A. endothelium, basement membrane, retikuloepitelial cells *
B. macrophages, basal membrane, reticular cells
C. the endothelium, the basement membrane, reticuloendothelial cells
D. endothelium, basement membrane reticular fibers
E. Only the endothelium and basement membrane

323. In the center of erythropoietic island located:
A. macrophage *
B. megakaryocyte

C. platelet
D. a reticulocyte
E. endotheliocyte

324. In Peyer's patches are distinguished:
A. dome, follicular zone parafollicular zone *
B. white and red pulp
C. the cortex and medulla
D. cortex, medulla and paracortical zone
E. dome, medulla and paracortical zone

325. The white pulp of the spleen is:
A. T - and B-lymphocytes *
B. T-lymphocytes and macrophages
C.) B-lymphocytes and reticular cells
D. splenocytes and red blood cells
E. plasma and reticular cells

326. The plimbicary (azurophiliC. granules of neutrophilic granulocytes include:
A. acid phosphatase *
B. histamine
C. alkaline phosphatase
D. heparin
E. immunoglobulins

327. At what stage erythrogenesis nucleus out of the cage?
A. oxyphilic normotsit *
B. basophilic normotsit
C. polychromatic normotsit
D. erythroblast
E. pronormotsit

328.Indicate the youngest morphologically identifiable cell thrombocytopoiesis:
A. megakaryoblasts *
B. platelet
C. promegakariotsit
D. monoblast
E. megakaryocyte

329. Starting with a stage granulocytopoiesis cells lose their ability to reproduce?
A. metamielotsit *
B0 medullocell
C.) progranulocyte
D. myeloblast
E. stab leukocytes

330. The percentage of basophilic leucocytes in the blood:
A. 0-1% *
B. 4-8%
C. 2-5%
D. 65-75%
E. 0-0.5%

331. Land myofibrils between the two lines is called the Z:
A. sarcomere *
B. T-tubule system
C. and the disc
D. N-Zone
E. sarcosome

332. The thin protofibrils consist of:
A. actin *
B. myosin
C. nebulin
D. immunoglobulin
E. albumin

333. A disk comprising:
A. myosin and actin partially *
B. T and myosin system
C. only myosin
D. only actin
E. contains nothing

334. And the disc is formed from:
A. actin, tropomyosin, troponin *
B. myosin, troponin, tropomyosin
C. only actin
D. actin and myosin, troponin
E. and partially actin myosin

335. The source of skeletal muscle tissue:
A. myotome *
B. mesenchyme
C. mesoderm
D. ectoderm
E. mioepikardial plate

336. Surfactant is produced:
A. alveolocytes type 2 *
B. 1-type alveolocytes
C. epithelial cells of bronchioles
D. goblet cells
E. 3 alveolocytes type

337. The structure of the aero-hematic barrier includes:
A. alveolotsit1 type *
B. multi-row epithelium of bronchi
C. 2-type alveolotsit
D. of lung macrophages
E. 3-type alveolitsit

338. Which cells are absent in the trachea:

A. top*
B. goblet
C. endocrine
D. ciliate
E. basal

339. The structural unit of the respiratory department of light:
A. acinus*
B. slice
C. follicle
D. pouch
E. island

340. bronchi medium caliber tend to:
A. fibro - cartilaginous shell sosotoit of elastic cartilage *
B. the absence of glands in the submucosa
C. Lack of muscle plates
D. the presence of fibro - cartilage shell in the form of a ring
E. covered with a single layer of cylindrical epithelium limbic

341. In the gray matter of the spinal cord do not occur:
A. granular neurons *
B. myelinated nerve fibers
C. beam neurons
D. inside neurons
E. radicular neurons

342.V formation of glomeruli cerebellum are involved:
A. granular cells spread moss family of fiber *
B. spread moss family fibers and basket cells
C. pottle and small stellate neurons
D. small stellate neurons and spindle neurons
E. cells and Purkinje fibers spread Moss family

343. The cells of the outer granular layer of the cerebral cortex of the brain:
A. small pyramidal neurons *
B. spindle neurons
C. ganglion neurons
D. psevdounipolyarnye neurons
E. large stellate neurons

344. As part of the motor cortex of the brain is not expressed:
A. inner granular layer *
B. a molecular layer
C. the outer granular layer
D. a layer of ganglion
E. layer of polymorphic cells

345. The autonomic nervous ganglia is not peculiar:
A. consist of radicular cells *
B. preganglionic fibers - cholinergic
C. postganglionic fibers terminate in the organs

D. consist of multipolar neurons
E. preganglionic fibers mainly mielinlin

346. The cells lining the ventricles of the brain and the central canal of the spinal cord:
A. ependimogliocytes *
B. astrocytes
C. oligodendrogliocytes
D. endothelial
E. microglia

347. In the formation of the blood-brain barrier are involved:
A. astrocytes *
B. multipotential glia
C. ependimocytes
D. neyrolemmotsicytes
E. oligodendrogliocytes

348. In the formation of the nerve fiber involved:
A. neyrolemmocytes*
B. ependimocytes
C. microglia
D. protoplasmic astrocytes
E. fibrous astrocytes

349. The MFD is peculiar:
A. the momentum carried saltatory
B. a continuous membrane depolarization
C. occurs in the autonomic nervous system
D. pulse propagates slowly
E. is the type of fiber cable

345. Tigroid substance neuron is the aggregate of:
A. granular endoplasmic reticulum and ribosomes *
B. smooth endoplasmic reticulum and ribosomes
C. the Golgi complex and mitochondria
D. smooth endoplasmic reticulum and mitochondria
E. peroxisomes and lysosomes

346. Describe the main structural elements of the choroid eye apple:
A. choroid, ciliary body, iris *
B. fibrous casing ciliary body, sclera
C. choroid, lens, iris
D. iris, sclera, retina
E. of the retina, the sclera, vitreous

347. The cornea. Select the incorrect statement:
A. refers to the accommodative apparatus of the eye *
B. the outside is covered by stratified squamous epithelium not keratinizing
C. does not contain blood vessels
D. is a part of the fibrous sheath
E. has a free nerve endings

348. The transparency of the vitreous body gives:
A. vitrein *
B. hyaluronic acid
C. eleidin
D. lipoproteins
E. crystallin

349. The organ of hearing is:
A. into the cochlear canal *
B. in the sacculus
C. in a utriculus
D. on the vestibular membrane
E. hearing scallops

350. In the retina are absent:
A. psevdounipolar neurons *
B. vial views neurons
C. horizontal neurons
D. ganglion neurons
E. rod neurons

351. The cells destroy bone tissue is:
A. osteoclasts*
B. fibroklasts
C. osteoblasts
D. osteocytes
E. hondroklasts

352. Retikulofibroz bone tissue in the adult body is found:
A. in place overgrown cranial sutures *
B. in the compact substance of long bones
C. in the flat bones
D. in the cancellous bones
E. metaepiphyseal plate

353. The structural unit of compact bone substance tube is:
A. osteon*
B. osteocyte
C. osteoblast
D. osteoclast
E. periosteum

354. The periosteum is formed:
A. from an outer fiber portion and the inner cell *
B. the outside of the cell and the inner portion of the fiber
C. the reticular cells and reticular fibers
D. osteocytes, osteoclasts and basal membrane
E. osteoblasts, osteocytes and osteoclasts

355. The growth of long bones in dilnu carried out by:

A. metaepiphyseal plate *
B. the periosteum
C. endosteum
D. internal and external master records
E. osteon

356. The epidermis develops from:
A. ectoderm *
B. endoderm
C. mesoderm
D. coelomic epithelium
E. dermatome

357. The pigment melanin is synthesized:
A. melanocytes *
B. spiny cells
C. melanotropocytes
D. basal epidermocytes
E. melanoforocytes

358. The cells of the granular layer of the epidermis contains:
A. grain keratohyalin *
B. grain eleidin
C. solid keratin
D. air bubbles
E. soft keratin

359. The skin of the fingers is not peculiar:
A. does not contain sebaceous glands
B. contains sweat glands
C. epidermis consists of five layers
D. papillary dermis is well developed
E. is covered by stratified squamous epithelium nonsquamous *

360. Langerhans cells of the epidermis are:
A. macrophages *
B. lymphocytes
C. cells synthesize melanin
D. cambial cells
E. cells synthesize keratin

361. The structural-functional unit of the pancreas:
A. acinus*
B. follicle
C. pancreatic islet
D. discount-islet cells
E. slice

362. Fundus glands do not contain:
A. goblet cells *
B. the parietal cells
C. parietal cells

D. endocrine cells
E. a main cell

363. Enamel is composed of:
A. prisms*
B. fibers
C. ganoblast
D. tubules
E. plates

364. The cardiac gastric cancer in the structure:
A. simple branched tubular *
B. simple straight tube
C. simple alveolar
D. complex tubular
E. complex alveolar

365. Sinusoids of the liver is peculiar:
A. the absence of the basement membrane *
B. the presence of continuous basal membrane
C. high blood pressure
D. contains pure arterial blood
E. contains pure venous blood

366. Cartilage tissue is formed:
A. chondrocytes, chondroblasts and intercellular substance *
B. by chondrocytes, reticular fibers and vessels
C. chondrocytes and chondroblasts
D. chondrocytes and fibers prehondroblastami
E. chondrocytes and amorphous material

367. Isogeneic group is:
A. chondrocytes, lying in one cavity *
B. osteocytes lie in the gaps
C. a group of mesenchymal cells
D. concentrated areas of the intercellular substance
E. a group of chondroblasts in perichondrium.

368. Hyaline cartilage found in:
A. trachea*
B. ear
C. the intervertebral disc
D. in the field of transition tendon in hyaline cartilage
E. in small bronchi

369. Power cartilage articular surfaces is carried out at the expense of:
A. synovial*
B. perichondrium
C. the vessels in the outer surface of cartilage
D. vessels deepest part of the cartilage
E. the periosteum

370. The cartilaginous model of the future bone is made up of:
A. perichondrium surrounding hyaline cartilage *
B. perichondrium surrounding elastic cartilage
C. perichondrium surrounding fibrocartilage
D. embryonic hyaline cartilage without perichondrium
E. elastic cartilage surrounded by periosteum

371. Endocrine cells produce:
A. hormones *
B. enzymes
C. enzymes
D. hydrochloric acid
E. mucus

372. The hormone effect on cell:
A. target *
B. stem
C. cambium
D. growing
E. basal

373. In the anterior hypothalamus, located:
A. supraoptic and paraventricular nucleus *
B. or arcuate nucleus infundibulyarnoe
C. dorsomedial nucleus
D. premamillar kernel
E. the core Clark

374. Adenohypophysis develops:
A. from buccal *
B. glia
C. neuroblasts
D. coelomic epithelium
E. of the roof of the diencephalon

375. K-cells of the thyroid glands produce:
A. tireokaltsitonin *
B. thyroxine
C. triiodothyronine
D. parathyrin
E. thyroid-stimulating hormone

376. The formation of tissue from the rudiments of it:
A. histogenesis *
B. proliferation
C. metaplasia
D. gastrulation
E. hypertrophy

377. The genetically-programmed differentiation of tissues is:
A. determination *

B. integration
C. differentiation
D. regeneration
E. metaplasia

378. Combining the various tissues and organs in a single organism is:
A. integration *
B. determination
C. regeneration
D. metaplasia
E. differentiation

379. What is one of the characteristics of epithelial tissue:
A. does not contain blood vessels *
B. has a good blood supply
C. rich in intercellular substance
D. does not regenerate
E. does not contain nerve endings

380. Simple squamous epithelium covers:
A. bladder mucosa
B. serous membranes *
C. bronchi
D. the mucosa of the small intestine
E. the rectal mucosa.

381. By the cardiac conduction system are:
A. pacemaker cells, intermediate cells, Purkinje fibers *
B. intercalated plate, pacemaker cells, intermediate klekti
C. Purkinje fibers, bundles of Hiss and the gusset plates
D. Purkinje fibers, bundles of Hiss and intermediate cells
E. bundles of Hiss and Purkinje fibers.

382. The cells tend pacemakers:
A. contains few organelles *
B. rich in mitochondria
C. cytolemma forms a T tubular system
D. are rich in the sarcoplasmic reticulum
E. performs the function of contractile

383. Epicardium. Select the incorrect statement:
A. is covered with a single layer of epithelium kubichesim *
B. consists of a thin plate of connective tissue
C. tightly adherent to the myocardium
D. is the visceral pericardium leaflet
E. of the free surface is covered mesothelium

384. Endocardium missing:
A. external elastic membrane *
B. subendothelium
C. musculo - elastic layer
D. endothelium

E. an outer layer of connective

385. A typical cardiomyocyte not typical:
A. cytoplasm is almost devoid of organelles *
B. cytoplasm is rich in myofibrils
C. cytolemma forms a T tubular system
D. a lot of the sarcoplasmic reticulum
E. function - reduction

386. To dualmembrane organelles include:
A. mitochondria *
B. endoplasmic reticulum
C. molgi complex
D. mysosomes
E. meroxyoms

387. The cell has a well-developed granular EPS, is involved in the synthesis of:
A. protein *
B. lipids
C. glycogen
D. pigments
E. lysosomes

388. The lysosomes are well developed in:
A. macrophages *
B. fibroblasts
C. plasma cells
D. myocytes
E. neurocyte

389. The lysosomes are formed:
A. Golgi *
B. of the smooth endoplasmic reticulum
C. granular endoplasmic reticulum
D. core
E. mitochondria

390.Ostatochnye cells - a type:
A. lysosomes *
B. peroxisomes
C. inclusions
D. mitochondria
E. diplosom

391. Cilium consists of:
A. microtubules *
B. microfilaments
C. myofibrils
D. neurofibrils
E. tonofibrils

392. Microtubules formed protein:
A. fillagrinom
B. actin
C. tubulin *
D. myosin
E. keratin

393. The flagella are:
A. movement of sperm organelles *
B. special organelles of cells of the respiratory tract
C. special organelles intestinal cells
D. special organelles of cells of the stomach
E. organelles movement of eggs

394. Ribosomes are located on the surface:
A. granular EPS *
B. agranular EPS
C. Golgi complex
D. mitochondria
E. lysosomes

395. The nucleolus functions as:
A. synthesis of glycogen
B. transfer of genetic information
C. rRNA synthesis *
D. of the genetic information
E. synthesis of DNA

396. The nucleolus is well painted:
A. basic Dyes *
B. acid dyes
C. magenta
D. orseinom

397. Indicate main process occurring to the S period of interphase:
A. doubling of the amount of DNA *
B. synthesis and accumulation of energy
C. growth of cells
D. synthesis of the protein tubulin
E. education spindle

398. The chromosomes at anaphase of mitosis:
A. spiralizuyutsya
B. expenses to the opposite poles of the cell *
C. are arranged in a plane ekvavatorial
D. disappear
E. appear

399. The number of chromosomes in human somatic cells is:
A. 46 *
B. 28
C. 48

D. 23
E. 24

400.Terminal department sperm tail contains:
A. A. contractile filaments *
B. B. axon
C. mitochondria
D. core
E. the proximal centriole

401. The egg does not contain:
A. centrioles *
B. endoplasmic reticulum
C. Golgi complex
D. mitochondria
E. nuclei

402. Included ooplasm oocyte are:
A. yolk granules *
B. enzymes
C. hormones
D. glycogen
E. the pigment inclusion

403. Women's reproductive cells at the stage of a small growth called:
A. oocytes I order *
B. oogonia
C. 2 oocytes order
D. ova
E. no right answer

404. What type of fragmentation typical of the man:
A. full uneven asynchronous *
B. full uniform synchronous
C. incomplete uneven asynchronous
D. full uniform asynchronous
E. incomplete uneven asynchronous

405. Please indicate what type of egg is characterized by a complete and uniform fragmentation:
A. oligoletsital plimbicary izoletsital *
B. a second oligoletsital izoletsital
C. mezoletsital moderately telolecithal
D. poliletsitalnoy sharply telolecithal
E. oligoletsitalnoy moderately telolecithal

406. What kind of a man egg:
A. oligoletsital second izoletsital *
B. mezoletsital moderately telolecithal
C. poliletsital sharply telolecithal
D. oligoletsital plimbicary izoletsital
E. poliletsital moderately telolecithal

407. Somites - are structural parts:
A. mesoderm *
B. endoderm
C. ectoderm
D. mesenchyme
E. of the neural tube

408. The first stage of gastrulation in the embryo of man is to:
A. on the night of 7 *
B. on the 5th day of development
C. on day 3 of development
D. on the 10th day of
E. on the 14th day of

409. The second stage of gastrulation in the embryo of man is to:
A. on the 14th day of *
B. on the 7th day of
C. on day 3 of development
D. on the 10th day of
E. on the 5th day of development

410. Late stage characterized by the formation of gastrulation:
A. mesoderm *
B. ectoderm
C. endoderm
D. somites
E. of the neural tube

411. In the human embryo is not following a provisional authority:
A. serous membrane *
B. chorion
C. amnion
D. the yolk sac
E. allantois

412. Specify a sign that is not characteristic of epithelial tissues:
A. presence of blood vessels *
B. presence of basement membrane
C. rich innervation
D. the ability to regenerate
E. polarity

413. Dark plate basement membrane of epithelial tissues containing fibrous structures:
A. type IV collagen *
B. type II collagen
C. type III collagen
D. type I collagen
E. V type collagen

414. The skin surface is covered:
A. stratified squamous keratinizing *
B. a single-layer flat

C. pseudostratified
D. stratified squamous
E. simple columnar

415. The epidermis develops from:
A. ectoderm *
B. visceral mesoderm sheet
C. endoderm
D. mesenchyme
E. parietal layer of mesoderm

416. Mesothelium lining the serous membranes, in the structure is:
A. mono-layer *
B. simple columnar
C. single-walled cubical
D. single-layer multi-row
E. transitional

417. Mucociliary airway in the structure is:
A. pseudostratified *
B. a single-layer flat
C. simple columnar
D. stratified squamous keratinizing
E. single-walled cubical

418. Indicate which of the ciliated epithelium cells secrete mucus:
A. goblet *
B. endocrine
C. ciliates
D. short intercalary
E. long intercalary

419. By the stratified epithelium include:
A. transitional *
B. mesothelium
C. pseudostratified ciliated
D. the endothelium
E. pseudostratified

420. The nuclear-free fragments of the cytoplasm of megakaryocytes are:
A. platelets *
B. monocytes
C. lymphocytes
D. erythrocytes
E. neutrophils

421. The average life span of red blood cells:
A. 120 days *
B. 9-12 days
C. 1-9 days
D. 5 months
E. 1year

422. blood cells migrating from the bloodstream into the connective tissue and differentiate into macrophages, called:
A. monocytes *
B. lymphocytes
C. neutrophils
D. of eosinophils
E. basophils

423. The cytoplasm of lymphocytes stained:
A. oxyphilic
B. basophilic *
C. polychromatic
D. Metahromatichno
E. no right answer

424. Antibodies isolated from the fractions following plasma proteins:
A. globulin *
B. albumin
C. fibrinogen
D. prothrombin
E. thrombin

425. All types of connective tissue develop from:
A. mesenchyme*
B. ectoderm
C. endoderm
D. mesoderm
E. of the neural tube

426. Adipose tissue refers to:
A. actually connective tissues
B. of connective tissue with special properties *
C. bone tissue
D. the dense connective tissue executed
E. loose connective tissue

427. Reticulum belongs to:
A. tissue with special properties *
B. skeleton connective tissues
C. actually connective tissues
D. loose connective tissue
E. the dense connective tissue executed

428. Mucosal tissue refers to:
A. tissue with special properties *
B. skeleton connective tissues
C. actually connective tissues
D. the dense connective tissue executed
E. loose connective tissue

429. The loose connective tissue and the dense connective varieties are:

A. actually connective tissue *
B. the connective tissue with special properties
C. skeletal connective tissue
D. the dense connective tissue executed
E. reticulum

430. The biosynthesis of collagen and elastin proteins to form fibers of the intercellular substance of connective tissue is carried out:
A. fibroblasts *
B. plasma cells
C. macrophages
D. mast cells
E. adipocytes

431. Protein core (amorphous) in the connective tissue are synthesized:
A. fibroblasts *
B. plasma cells
C. mast cells
D. macrophages
E. adipocytes

432. Antibodies are synthesized:
A. plasma cells *
B. mast cells
C. macrophages
D. fibroblasts
E. of melanocytes

433. Bundles, fascia, tendons and aponeuroses are:
A. the dense connective tissue executed *
B. dense irregular connective tissue
C. loose connective tissue
D. of tissues with special properties
E. no right answer

434. Strom forming organs formed:
A. reticulum *
B. loose connective tissue
C. adipose tissue
D. dense irregular connective tissue
E. the dense connective tissue executed

435. Argyrophilic fiber inherent intercellular substance:
A. reticulum *
B. adipose tissue
C. bone tissue
D. cartilage tissue
E. loose connective tissue

436. Mucous connective tissue found in:
A. the umbilical cord *
B. of hematopoiesis

C. of the vessel
D. tubular bones
E. mucosa

437. Cartilage tissue does not contain:
A. the blood vessels *
B. hydrophilic intercellular substance
C. collagen fibers
D. of elastic fibers
E. cells

438. The articular surface of the bone formed:
A. hyaline cartilage *
B. elastic cartilage
C. fibrocartilage
D. the dense connective tissue executed
E. loose irregular connective tissue

439. Isogeneic groups consist of:
A. chondrocyte *
B. chondroblast
C. hondroklastov
D. macrophages
E. osteocytes

440. The bone from the medullary cavity is covered:
A. endosteum *
B. the periosteum
C. endothelial
D. adipose tissue
E. endotenoniem

441. Outside the bone is covered:
A. the periosteum *
B. endosteum
C. endothelial
D. Peritenoniem
E. Endotenoniem

442. In the outer layer of the periosteum prevail:
A. collagen fibers *
B. osteoblasts
C. adipose tissue
D. reticular fibers
E. osteocytes

443. In the inner layer of the periosteum prevail:
A. osteoblasts*
B. collagen fibers
C. adipose tissue
D. reticular fibers
E. osteocytes

444. Osteoblast involved in:
A. failure of the bone tissue
B. nutrition bone
C. the synthesis of proteins of the intercellular substance *
D. education isogenic groups
E. no right answer

445. Multi bone cells called:
A. osteoblasts
B. osteocytes
C. osteoclast *
D. chondroblast
E. chondrocytes

446. Skeletal muscle tissue develops from:
A. mesenchyme
B. ectoderm
C. myotomy mesoderm *
D. visceral leaf splanchnotome
E. parietal layer splanchnotome

447. Cardiac muscle tissue develops from:
A. ectoderm
B. mioepikardialnoy plate visceral leaf splanchnotome *
C. mesenchyme
D. myotomy mesoderm
E. parietal layer splanchnotome

448. Skeletal muscle tissue is made up of:
A. myocytes
B. multicore muscle fibers *
C. cardiomyocytes
D. myoepithelial cells
E. muscle cells

449. The thick filaments of muscle protein consists of:
A. myosin *
B. actin
C. troponin
D. tropomyosin
E. titina

450. Myoepitheliocytes surrounding the end section of some exocrine glands develop from:
A. myotomy mesoderm
B. mesenchyme
C. visceral leaf splanchnotome
D. ectoderm*
E. endoderm

451. Actin filaments of skeletal muscle tissue are involved in education:
A. only the a drive

B. i only drive
C. a and i drive *
D. n-strip
E. mesophragma

452. H-band of skeletal muscle fibers in the heart:
A. isotropic disc
B. anisotropic disk *
C. mesophragma
D. telofragmy
E. actin protofibrils

453. Intercalated disks are structural components:
A. skeletal muscle tissue
B. cardiac muscle tissue *
C. smooth muscle tissue
D. myoepithelial cells
E. no right answer

454. Desmosomes, interdigitatsii and Nexus are typical intercellular connections for:
A. smooth muscle tissue
B. skeletal muscle tissue
C. cardiac muscle tissue *
D. myoepithelial cells
E. muscles and dilates the pupil constricotrs

455. The source of the regeneration of skeletal muscle tissue is:
A. mitosis
B. miosatellitocytes *
C. there is no source of regeneration
D. intracellular hypertrophy
E. myofibroblasts

456. The source of the regeneration of heart muscle tissue is:
A. mitosis
B. miosatellitocytes
C. there is no source of regeneration *
D. myofibroblasts
E. fibroklasts

457. T-tubules of skeletal muscle fiber are:
A. ducts agranular eps
B. intussusception plasmolemma *
C. ducts granular eps
D. sites golgi complex
E. a variety of lysosomes

458. Psevdounipolyarnye neurons have:
A. one process
B. two process *
C. three process
D. does not have the processes

E. many processes

459. All types of nerve cells have:
A. one axon
B. two axon
C. three axon
D. many axons
E. does not have the axon

460. Special organelles neurocytes are:
A. myofibrils
B. epitheliofibril
C. neurofibrillar*
D. microvilli
E. myofilaments

461. Tigroid painted:
A. impregnation with silver salts
B. aniline dyes *
C. orseinom
D. sudan iii
E. hematoxylin and eosin

462. The central canal of the spinal cord and brain ventricles are lined with:
A. oligodendrocytes
B. microglia
C. protoplasmic astrocytes
D. fibrous astrocytes
E. ependimogliocytes *

463. The cells of the mononuclear phagocyte system are:
A. ependimogliocytes
B. oligodendrocytes
C. microglia *
D. protoplasmic astrocytes
E. fibrous astrocytes

464. Efferent nerve ending is formed:
A. motor neuron dendrite
B. motor neuron axon *
C. dendrite sensory neurons
D. sensory neurons axon
E. dendrite neurons

465. What bronchus listed below:
A. bronchus caliber *;
B. bronchi medium caliber;
C. bronchus small caliber;
D. terminal bronchioles;
E. respiratory bronchioles.

466. What is the function carries cytolemma (select the wrong answer):

A. protein biosynthesis*
B. receptor
C. transport
D. dividing
E. Protective

467. How many layers of lipids is an elementary biological membrane:
A. double layer *
B. one layer
C. triple layer
D. four-layer
E. does not consist of lipids

468. Through what structure occurs transport of substances into the cell:
A. cytolemma *
B. the cilia
C. Golgi complex
D. ribosomes
E. polysomes

469. Are membrane organelles:
A. ribosomes and polysomes *
B. mitochondria and centrioles
C. smooth and granular endoplasmic reticulum
D. the Golgi apparatus and the microtubule
E. and the lysosome centrioles

470. The mitochondria are distinguished:
A. membrane, perinuclear space of the crypt, matrix
B. membrane, a basic substance complex pore matrix
C. the outer and inner membrane cristae, matrix *
D. matrix, Kristen, perinuclear space, a basic substance
E. of the outer and inner membrane cristae, matrix pore complex

471. Specify the structures found in all cells having a specific structure and performing a specific function:
A. include
B. the core
C. cytoplasm
D. organelle *
E. epitheliofibril

472. What is the organelle within the cell to digest the substance:
A. lysosome *
B. the peroxisome
C., endoplasmic reticulum
D. centrioles
E. complex Golzhi

473. Point to the non-permanent component of the cell:
A. hyaloplasm
B. enable *

C. lysosomes
D. special structures
E. robosomy

474. The protein of microtubules:
A. actin
B. myosin
C. ceratin
D. tubulin *
E. eleidin

475. The main components of nuclear chromatin:
A. DNA
B. RNA
C. proteins chromosome
D. proteins and chromosome DNA *
E. the tRNA

476. The formation of tissue from the rudiments of it:
A. histogenesis *
B. proliferation
C. blastogenesis
D. metaplasia
E. implantation

477. The formation of specific structures and properties characteristic of the tissue is:
A. differentiation*
B. Integration
C. determination
D. proliferation
E. metaplasia

478. Association various tissues and organs in the whole body, is:
A. integration *
B. determination
C. regeneration
D. metaplasia
E. apoptosis

479.Indicate one of the basic properties of the epithelial tissue:
A. there are no blood vessels *
B. rich in blood vessels
C. low capacity for regeneration
D. rich intercellular substance
E. is not always in the basement membrane lezhit

480.Indicate type of epithelium onto-phylogenetic classification:
A. a multi-layer type
B. hepatic type
C. celonefrodermal type *
D. multi-row type
E. type Single row

481.One-layer squamous epithelium lining:
A. kidney
B. serous membranes *
C. small intestine
D. esophagus
E. mouth

482.Sekret endocrine glands secrete in:
A. blood*
B. intestinal cavity
C. bile
D. urine
E. of the uterus

483.Glandular cell during secretion retains its structure, what type of secretion?
A. apocrine
B. eccrine
C. holocrine
D. merocrine*
E. endocrine type

484.Glandular cell upon secretion is completely destroyed, what type of secretion?
A. apocrine
B. merocrine
C. holocrine *
D. endocrine
E. eccrine

485. Gland has branched excretory duct, it is iron:
A. complex *
B. tubular-alveolar
C. tubular
D. easy
E. simple alveolar

486.Terminal departments glands contain serous and mucous cells is iron:
A. tallow
B. endocrine
C. mucosa
D. mixed *
E. protein

487.Phase synthesis of secretory product is carried out:
A. microtubules
B. endoplasmic reticulum *
C. the cell center
D. lysosomes
E. mitochondria

488.Accumulation secretory product and packaging takes place in:
A. Golgi *

B. mitochondria
C. the cell center
D. cilia
E. lysosomes

489. Tissue group allocated by the modern classification (select the wrong answer):
A. nervous tissue
B. muscle
C. fabric internal environment
D. bone tissue *
E. epithelial tissue

490. The process of constant renewal of cells and non-cellular tissue structures are:
A. physiological regeneration *
B. reparative regeneration
C. differentiation
D. metaplasia
E. Integration

491. Regeneration after tissue damage are:
A. physiological regeneration
B. reparative regeneration *
C. metaplasia
D. differentiation
E. integration

492. The emergence of structures and properties characteristic to this type of tissues and organs:
A. proliferation
B. metaplasia *
C. differentiation
D. determination
E. integration

493. Specify uncharacteristic epithelium property:
A. the lack of blood vessels
B. the presence of basement membrane
C. the absence of intercellular substance
D. the presence of blood vessels *
E. form layers

494. A single-layer cubic epithelium lining:
A. ducts of the salivary glands *
B. serous membranes
C. small intestine
D. esophagus
E. mouth

495. Indicate type of epithelial morphological and functional classification:
A. epidermal
B. celonefrodermal epithelium
C. ependimoglial
D. multilayered epithelium *

E. intestinal

496. Simple columnar (cylindrical) limbic epithelia found in:
A. bronchi
B. small intestine *
G) bladder
D. oral
E. of the esophagus

497. The edges of the epithelial cells formed:
A. cilia
B. epitheliofibril
C. desmosomes
D. microvilli*
E. microtubules

498. Simple pseudostratified ciliated epithelium is found in:
A. airway *
B. small intestine
C. urinary puzre
D. renal tubules
E. oral

499. A characteristic feature of multi-row epithelium cells is the presence of:
A. cilia *
B. microvilli
C. flagella
D. apical folds plasmolemma
E. pseudopodia

500. Stratified squamous epithelium nonsquamous get together:
A. bladder
B. galbladder
C. epidermis
D. oral *
E. stomach

501. Stratified squamous keratinizing epithelium is found in:
A. esophagus
B. oral
C. skin epidermis *
D. gallbladder
E. stomach

502. What is the layer of cells is characteristic of the epithelial stratum:
A. surface
B. horn*
C. a layer of flat cells
D. gusset
E. mesothelia

503. The transitional epithelium found in:

A. esophagus
B. epidermis
C. oral
D. urinary ways *
E. the uterus

504. When filling his bladder epithelium:
A. thickens
B. stratum
C. thins *
D. becomes a multi-row
E. becomes stratified

505. The structure, located between the epithelium and the connective tissue:
A. muscularis
B. intercellular substance
C. the basal membrane *
D. brilliant layer
E. lamina propria

506. The secret of exocrine glands secrete in:
A. blood
B. interstitial fluid
C. lymph
D. the environment or cavities *
E. blood and lymph

507. The cells, which contributes to reduction of secretions from glands:
A. myoepithelial cells *
B. exocrine cells
C. glandulocytes
D. myocytes
E. of smooth muscle cells

508. The epithelium lining the airway wall:
A. multi-row ciliated *
B. stratified squamous
C. single-layer flat
D. transition
E. epithelium limbic

509. The structure has common structure, origin, and performing a specific function is called:
A. cloth *
B. body
C. system
D. cell
E. symplast

510. Epithelial tissue includes:
A. the intercellular substance
B. cells *
C. fibers

D. blood vessels
E. fibroblasts

511. Epithelial tissue is powered by:
A. own vessels
B. lymphatics
C. diffuse through the basement membrane *
D. own capillaries
E. diffuse through myshechnuyu plate

512. What body inner wall, which is covered by the endothelium:
A. stomach
B. the small intestine
C. kidney
D. heart *
E. of the uterus

513. Name the layers of stratified squamous epithelium nonsquamous:
A. basal, prickly, granular
B. basal, prickly, shiny
C. the basal, prickly, horny
D. basal, prickly, flat *
E. basal, prickly, horny

514. To what genetic type of epithelium is mesothelium:
A. angiodermal
B. celonefrodermal*
C. ependimoglial
D. epidermal
E. intestinal

515. The function of goblet cells:
A. secretory *
B. support
C. cambial
D. absorptive
E. protective

516. In what layer of the epidermis melanocytes located:
A. rogovovom
B. basal *
C. granular
D. brilliant
E. horny

517. Genetic tissue formation in a certain direction is:
A. proliferation
B. differentiation *
C. determination
D. integration
E. metaplasia

518. Describe the main features of epithelial tissue:
A. does not contain blood vessel *
B. many blood vessels
C. a lot of intercellular substance
D. does not regenerate
E. not lies on the basal membrane

519. A single-layer cubic epithelium found in:
A. trachea
B. esophagus
C. small intestine
D. renal tubules *
E. bladder

520. The authority, where he meets transitional epithelium:
A. of the epidermis
B. the rectum
C. the ureter *
D. the uterus
E. fallopian tube

521. The secretory gland department contains both serous and mucous cells. This iron:
A. protein
B. mixed *
C. endocrine
D. mucosa
E. exocrine

522. What body containing pseudostratified ciliate epithelium.
A. bronchus *
B. the ureter
C. stomach
D. skin
E. of the oviduct

523. Blood as a tissue:
A. quickly updated *
B. slowly updated
C. non-renewable
D. partially renewed
E. no right answer

524. Gemoreticulocytes are:
A. older red blood cells
B. dead red blood cells
C. the young red blood cells *
D. fragment of red blood cells
E. no right answer

525. For the azurophilic granules of neutrophils characterized by:
A. myeloperoxidase *
B. heparin

C. histamine
D. alkaline phosphatase
E. serotonin

526. In tissues monocytes turn into:
A. macrophages *
B. mast cells
C. fibroblasts
D. plasma cells
E. trophoblasts

527. The plimbicary function of red blood cells:
A. transport O2 and CO2 *
B. support
C. protection
D. phagocytosis
E. barrier

528. Intercellular substance rich fabric:
A. epithelial
B. nervous
C. muscle
D. internal environment *
E. bone

529. Sredniy diameter of human erythrocytes:
A. is less than 6 m
B. greater than 8 mm
C. 2,5 mm
D. 7-8 microns *
E. is greater than 10 microns

530. Main respiratory pigment of red blood cells:
A. sialic acid
B. myoglobin
C. phospholipids
D. hemoglobin *
E. surfactant

531. The percentage of neutrophils in the leukocyte formula:
A. 4-8%
B. 30-35%
C. 65-75% *
D. 30-40%
E. 55-60%

532. For specific neutrophil granules are characterized by:
A. acid protease
B. arylsulfatase
C. the acid phosphatase
D. alkaline phosphatase *
E. histaminase

533. The main function of neutrophils is:
A. collagen
B. phagocytosis *
C. the development of antibodies
D. oxygen transport
E. synthesis of elastin

534. The percentage of eosinophilic granulocytes:
A. 65-70%
B. 2-5% *
C. 4-8%
D. 30-35%
E. 7-8%

535. Participate eosinophils in allergy is mainly determined by:
A. the release of heparin
B. destruction of histamine and anafilacsine *
C. phagocytosis of microbes
D. antibody production
E. allocation serotonin

536. The percentage of basophilic granulocytes:
A. 6-8%
B. 0,5-1% *
C. 2-5%
D. 65-75%
E. 6-7%

537.Characterized pellet basophilic leukocytes is the presence of:
A. lysozyme arylsulfatase
B. heparin and histamine *
C. alkaline and acid phosphatases
D. lactoferrin
E. myeloperoxidase

538. The percentage of lymphocytes:
A. 6-8%
B. 20-35% *
C. 65-75%
D. 2-5%
E. 15-16%

539. The major source of human T-lymphocytes is:
A. bone marrow
B. thymus *
C. spleen
D. almonds
E. lymph node

540.Main source of B-lymphocyte is:
A. the bone marrow *

B. the thymus
C. the amygdala
D. bursal
E. lymph node

541. The percentage of monocytes:
A. 2-5%
B. 6-8% *
C. 65-70%
D. 0-1%
E. 10-12%

542. Human platelets are:
A. syncytium
B. polinuclear cells
C. fragments of the cytoplasm of megakaryocytes *
D. mononuclear cells
E. symplast

543.Main platelet function is to participate in:
A. cellular immunity
B. the production of antibodies
C. phagocytosis of microbes
D. blood coagulation *
E. tissue immunity

544. The most numerous lymph formed elements are:
A. erythrocytes
B. lymphocytes *
C. monocytes
D. granulocytes
E. platelets

549. Hematopoiesis embryo starts at:
A. spleen
B. liver
C. bone marrow
D. yolk sac *
E. allontoise

550.Universal of hematopoiesis in the adult organism are:
A. Liver
B. the thymus
C. spleen
D. red bone marrow *
E. yolk sac

551. Electrocardiogram male 23 years there are signs of violation of the excitation from the atria to the ventricles (due to the breach of ion exchange between the cells) caused by rheumatic miocarditis. Changing any structure of the contacting surfaces of heart cells most reliably explains these phenomena?
A. desmosomes

B. microvilli
C. simple contact
D. slotted contacts *
E. tight junctions

552. A man 42 years for diagnosis of liver biopsy. In the study of biopsy material it was found that its cells have increased basophilic of the cytoplasm. This indicates that the cell occurs:
A. the active protein synthesis *
B. lipid deposition
C. active transport agents
D. active splitting absorbed substances
E. the process of mitotic division

553. A woman of 67 years removed a tumor of the uterus. Histological, the tumor cells are found in the multipolar mitosis - paintings differences are not two, but several poles. In violation of any condition of organelles most authentic appearance multipolar mitosis?
A. the secondary lysosomes
B. smooth endoplasmic reticulum
C. granular endoplasmic reticulum
D. peroxisomes
E. centrioles *

554. The patient's blood is detected low levels of albumin and fibrinogen.
Reduced activity of some liver hepatocytes organelles most reliably causes this phenomenon?
A smooth endoplasmic network
B. mitochondria
C. granular endoplasmic reticulum *
D. golgi complex

555. The cell laboratory animal succumbed to excessive X-rays. The resulting protein fragments formed in the cytoplasm.What cell organelles will take part in their recovery?
A. lysosomes *
B. Golgi complex
C. ribosome
D. endoplasmic reticulum
E. cell center

556. A person diagnosed with galactosemia - storage disorder. As a result of violation of a cellular structure had this disease?
A. Golgi complex
B. Centrosomes
C. lysosomes *
D. cellular center
E. mitochondria

557. Electron microscopic study of hyaline cartilage cells are found with well-developed granular endoplasmic grid, the Golgi complex. What function do these cells?
A. deposition of fat
B. the destruction of the intercellular substance of the cartilage
C. deposit of glycogen
D. education intercellular substance *
E. tropism cartilage

558. Chemical plasmolemma factor had an effect on the cells. As a result, the cell has changed its form. Which layer plasmolemma took part in it?
A. bilipid
B. glycocalix
C. cortical *
D. hydrophilic
E. hydrophobic

559. In the experiment violated the structure of close contact between the epithelial cells. What is the function of the epithelium to suffer?
A. secretors
B. suction
C. vitamin "D" - producing
D. mechanical *
E. excretory

560. In the electron micrograph shows a cell in which there are no nuclear membrane and nucleoli. Chromosomes are placed freely, centrioles migrate to the poles. In which phase of the cell cycle is a cell?
A. the interphase
B. in anaphase
C. in metaphase
D. in telophase
E. in prophase *

561. In carrying out scientific experiments, the researchers destroyed one of the cell structures that impair the ability of cells to divide. What structure most likely been broken?
A. mitochondria
B. glycocalix
C. the plate complex
D. micro fibrils
E. centrosome *

562. A cell treated with substances that disrupt the conformation of proteins that make up cytolemme. What are the functions of the cell surface will be broken?
A. barrier
B. the extrusion process
C. segregation and accumulation of products
D. education contacts
E. transport and receptor *

563. In carrying out scientific experiments, the researchers destroyed one of the cell structures that impair the ability of the cells to the formation of cell-cell contacts. What structure most likely been broken?
A. mitochondria
B. glycocalix *
C. the plate complex
D. micro fibrils
E. centrosome

564. A newborn diagnosed developmental disorder ventricular myocardium. In violation of the embryonic development of this pathology is linked to the source?
A. ectoderm
B. endoderm
C. visceral leaf splanchnotome *
D. mesenchyme
E. parietal layer splanchnotome

565. During the experiment on a frog blastula stage blastomere was removed 16 blastomeres The separated cells continue to develop normally and ushered in a new embryo. What important property blastomeres has been demonstrated?
A. totipotency *
B. ability to embryonic induction
C. the ability to differentiate
D. education poles embryo
E. education germ layers

566. If Addison's disease is observed hyperpigmentation of the skin. This is attributed to common sources of melanocytes and the adrenal medulla. What is the source of their development?
A. the ectoderm
B. mesoderm
C. mesenchyme
D. the neural crest *
E. endoderm

567. Human embryo slides taken from involuntary abortion, see the embryonic shield, which recognized two layers - the ectoderm and ento-. At what stage of embryonic development was the embryo?
A. education blastula
B. histogenesis
C. progeneza
D. gastrulation *
E. organogenesis

568. A newborn boy (10 days) observed numerous defects of the skeleton. Violation of any of embryonic germ most reliably led to the emergence of this disease?
A myotomy
B. mesenchyme *
S. dermatome
D. ectoderm
E. endoderm

569. In the experiment on a frog embryo destroyed the external germinal leaf - ectoderm. What morphological structure of these will not be further developed at this embryo?
A. bone
B. somites
C. nefrotom
D. splanhnotom
E. epidermis *

570. One of the critical periods of embryogenesis is the introduction of human embryo in the uterine wall at the 7th day. In embryoblast in this period is the first phase of gastrulation. How can this process is?
A. epiboly
B. migration
C. delyaminatsiya *
D. intussusception
E. neurulation

571. During gastrulation in the embryo underdeveloped primary Hensen's knot. Development of the axial body falters?
A. chords *
B. crest
C. neural groove
D. neural tube
E. mantle layer of the neural tube

572. Microscopic examination of the female internal reproductive organs that are removed during surgery, the embryo was found built from two blastomeres. Call the place of its localization under normal development.
A. ovary
B. fallopian tubes, uterus about
C. the uterine cavity
D. abdomen
E. ampoule part of the fallopian tube *

573. In the experiment, the embryo is destroyed rabbit myotome. Violation of any structure will be observed at this embryo?
A. serous membranes
B. axial skeleton
C. the connective tissue of the skin
D. smooth muscle
E. skeletal muscles *

574. Microscopic examination of the fetus is determined by the chorion shells. What is the main function of this body provides?
A. exchange of substances between the organism of mother and fetus *
B. hematopoietic
C. the production of amniotic fluid
D. education primary germ cells
E. education lymphocytes

575. The early human embryo gastrulation occurs through delyaminatsii embryoblast. Which structure is the rudiment of the nervous system?
A. the hypoblast
B. the trophoblast
C. in the epiblast *
D. in the marginal zone hypoblast
E. in the central zone E. hypoblast

576. The process of crushing the zygote completes the formation of the blastula. What kind of blastula is typical for a person?

A. morula
B. celoblastula
C. diskoblastula
D. amfiblastula
E. blastocyst *

577. It starts with the implantation of the blastocyst person. What is the period of embryogenesis, which begins simultaneously with the implantation?
A. histogenesis
B. intussusception
C. differentiation
D. gastrulation *
E. fragmentation

578. "Man was born under a lucky star." What kind of "jacket" referred to in this proverb?
A. amniotic *
B. yolk
C. serosa
D. chorionic
E. trophoblastic

579. In the experiment, the embryo is destroyed birds sclerotome. Violation of any structure will be caused by this manipulation?
A. axial skeleton *
B. the connective tissue of the skin
C. the stroma of the internal organs
D. gonadal stroma
E. chords

580. During gastrulation, the embryo is transferred from gistiotrofnogo to gematotrofnomu way of eating. What is a provisional authority for the first time provides it?
A. amnion
B. trophoblast *
C. the yolk sac
D. chorion
E. allantois

581. Histocompatibility antigen child inherits from the father and the mother. It is known that the expression of the parental antigens in embryogenesis starts too early. But the mother's immune system does not reject the fetus. What is a provisional authority for the first time prevents the rejection of the fetus the mother's body?
A. amnion
B. chorion *
C. allantois
D. the yolk sac
E. umbilical

582. Blastocyst, coated fertilization, genetically inhibited the synthesis of lytic enzymes in the cells of the trophoblast. What is the process of embryogenesis may be delayed or may not take place?
A. epiboly
B. delyaminatsiya
C. immigration

D. gastrulation
E. implantation *

583. In the embryonic material misbehaving endoderm differentiation. Changes in the development of public bodies may be in this case?
A. the aorta
B. heart
C. kidney
D. stomach *
E. salivary glands

584. In the formation of the human embryo can be seen in the appearance of its composition cavity light small blastomeres at the periphery of the large and dark blastomeres on one of the poles. As referred embryo at this stage?
A. morula
B. blastocyst *
C. zygote
D. gastrula
E. embryonic disc

585. During the forensic examination of a woman who died in a car accident, found the embryo in the early gastrula. Name the place of its localization under normal development.
A. ovary
B. ampoule of the oviduct
C. the mother of the oviduct
D. the wall of the uterus *
E. abdomen

586. In the period of early gastrulation human form ecto- and endoderm. How does the mechanism of formation of these pages?
A. delyaminatsiya *
B. intussusception
C. epiboly
D. immigration
E. intussusception epiboly

587. The uterus was detected human embryo is not attached to the endometrium. What stage of development is responsible placement of the embryo?
A. zygotes
B. blastocysts *
C. morula
D. gastrula
E. neurula

588. In the first critical period in the fallopian tube for an unknown reason in the bud held dissolution fertilization membrane. What complication of pregnancy is possible in this case?
A. the death of fetus
B. implantation of the embryo in the wall of the tube *
C. invagination wall blastocyst
D. return blastocysts back into the pipe zone ampullar
E. education two blastocysts

589. In the female genital tract sperm move toward the egg against liquids (distant stage of fertilization). What is the name of a direction of movement?
A. chemotaxis
B. thermotaxis
C. rheotaxis *
D. capacitation
E. acrosomal reaction

590. In human embryogenesis 20 hours is separated from the body of the embryo provisory organs. What makes this process?
A. overall
B. amniotic fold
C. trunk fold *
D. the yolk stalk
E. somites

591. They produce a number of hormones, the placenta acts as a temporary endocrine gland. Which hormone can be identified in the blood of women already on the third or fourth day after the beginning of implantation and is used in medical practice for the diagnosis of early pregnancy?
A. oxytocin
B. somatostatin
C. progesterone
D. vasopressin
E. chorionic gonadotropin *

592. In the study of amniotic fluid obtained by amniocentesis (puncture of the amniotic sac), found cells whose nuclei contain the sex chromatin (Barr body). What marked out this may indicate?
A. polyploidy
B. development of the male fetus
C. genetic abnormalities in fetal development
D. trisomy
E. development of female fetuses *

593. A newborn baby was diagnosed blue asphyxia. What a vessel that brings oxygen from the mother to the fetus, was squashed by during childbirth?
A. umbilical artery
B. umbilical Vienna *
C. chorionic Vienna
D. chorionic artery
E. uterine artery

594. The preparation can be seen at the time of oocyte fertilization his sperm. What is the main result of fertilization?
A. cortical reaction
B. definition of the child's sex
C. completion of oocyte meiosis
D. penetration sperm ovolemmy
E. education zygote *

595. On histological preparation shows extraembryonic body which is bubble associated with the intestinal tube. The wall from the inside sent epithelium, connective tissue is formed from the

outside. In the early stages of embryogenesis it is the function of blood-forming organs. Name this body.
A. placenta
B. allantois
C. amnion
D. the umbilical cord
E. the yolk sac *

596. The process of implantation takes place in two stages: adhesion and invasion. Morphological manifestations of adhesion of the blastocyst is:
A. attachment of the blastocyst to the endometrium *
B. destruction of the epithelium of the endometrium
C. the destruction of the connective tissue of the endometrium
D. the destruction of the vessels of the endometrium
E. building gaps

597. In the process of embryogenesis, the trophoblast forms the rudiment of the body that has the endocrine function. What is the body?
A. amnion
B. threaded chorion (fetal part of the placenta) *
C. the yolk sac
D. allantois
E. umbilical

598. Found a human embryo, built from two blastomeres. Name the place of its localization under normal development?
A. fallopian tubes *
B. the cavity of the uterus
C. abdomen
D. uterine lining
E. ovary

599. In the early stages of development of the human embryo occurs fingerlike outgrowth of the ventral wall of the primary cancer, which grows into the amniotic stem. What is the name of this provisory body?
A. placenta
B. the yolk sac
C. amnion
D. allantois *
E. umbilical

600. In histological specimen is a cross-section of the body, which forms the basis of the mucous connective tissue, two arteries and Vienna. What is this body?
A. the umbilical cord *
B. allantois
C. the yolk sac
D. amnion
E. placenta

601. In the process of embryogenesis damage occurred formation of the anterior primary cancer. Select a possible localization of malformations?
A. liver

B. stomach
C. institutions mouth *
D. pancreas
E. small Intestine

602. There has been a compression of the umbilical cord of the fetus, but the blood flow between the fetus and the mother is not broken. Availability of public structures contributed to this in the first place?
A. mucous connective tissue *
B. the balance of the allantois
C. lining of arteries
D. shell veins
E. the balance of the yolk sac

603. The woman had been ill with the flu, and it turned out that it happened during the early phase of gastrulation. What consequences can we expect?
A. violations of the formation of the mesoderm
B. violations of ecto- and endoderm formation *
C. violations of education mesenchyme
D. violations of epiboly
E. violation of intussusception

604. The human semen - ejaculate normally in 1 ml should be at least:
A. 20 million sperm *
B. 350 million sperm
C. 1 million sperm
D. 350 thousand sperm
E. 1000 sperm

605. The egg shell has the following person:
A. radiant crown and ovolemmu
B. the transparent membrane and radiant crown
C. transparent shell and ovolemmu
D. ovolemmu, transparent membrane and radiant crown *
E. serous membrane, the transparent membrane and radiant crown

606. The patient is detected slight flushing of the skin and peeling hyperemic areas. The boundaries of damaged skin are clearly defined, have an irregular shape, palpation painless. Which epithelia struck mycosis?
A. transition
B. multi-layer cubic
C. stratified squamous keratinizing *
D. stratified squamous not keratinizing
E. pseudo stratified prismatic ciliated

607. After the tourniquet from the test are observed petechial hemorrhages on the surface of the forearm (15 pieces). With any impairment of blood cells is the reason?
A. neutrophil
B. macrophages
C. basophils
D. platelet *

E. erythrocytes

608. Beautician asked the patient to waive his tattoo on his shoulder. What is the substance that is found in the connective tissue, limiting the spread of the dye and allows this kind of "art"?
A. heparin
B. fibronectin
C. gamma globulin
D. elastin
E. hyaluronic acid *

609. The aging of human skin characterized by the formation of wrinkles and folds. Changes in some structures, mainly cause this condition?
A. the elastic fibers *
B. collagen fibers
C. the epidermis
D. in an amorphous substance
E. in the subcutaneous fat

610. Patients underwent corneal transplant. What are the features of the structure of the cornea allow engraftment of hope for her, not rejection?
A. over-innervations
B. availability of stratified squamous epithelium
C. lack of blood and lymph vessels typical *
D. the presence of the connective tissue
E. availability of a single layer of squamous epithelium

611. Ophthalmologist patient appealed with complaints of pain in the eyes, which arose after a long stay patient in the field during dusting storm. The doctor found damage to the front surface of the corneal epithelium. Which cells provide regeneration of the surface epithelium?
A. basal cells *
B. the cells of the stratum corneum
C. the cells of the granular layer
D. cells brilliant layer
E. the cells of the surface layer

612. The working of chemical production after inhaling corrosive fumes took the death of the ciliated cells of the bronchial tubes. Due to some cells of epithelial regeneration take place?
A. basal cell *
B. goblet cells
C. endocrine cells
D. ciliated cells
E. without ciliated cells

613. The people of advanced age, a decrease amount of bone tissue, which indicates the development of osteoporosis. Activation of any bone cells determines the development of this disease?
A. osteoblasts
B. osteoclasts *
C. macrophages
D. tissue basophils
E. osteocytes

614. Gistopreparate presented tissue which contains cells without processes and each having several tens of nuclei. One of the cells has a corrugated surface area through which the secretion of hydrolytic enzymes. What fabric is represented in gistopreparate?
A. cartilage tissue
B. epithelial tissue
C. nervous tissue
D. bone *
E. muscle tissue

615. Patient blood samples for analysis. His data show that 30% of the erythrocytes are of irregular shape. As the name of this patient's condition?
A. physiological poikilocytosis
B. anisocytosis
C. pathological poikilocytosis *
D. macrocytosis
E. microcytosis

616. In the peripheral blood smear can see a large cage with weakly basophilic bean-shaped nucleus and cytoplasm. Cage is among the most visible in the field of view. What is a cell?
A. plasma cell
B. macrophage
C. monocyte *
D. average lymphocyte
E. small lymphocyte

617. Smear of peripheral blood leukocytes predominate among the rounded cells with segmented nuclei. The fine granularity in their cytoplasm is painted as the acidic and basic dyes. As these cells are called?
A. young neutrophils
B. basophiles
C. eosinophils
D. segmented neutrophils *
E. monocytes

618. In histological specimen of cartilage detected isogenic group cells. What are the initial cells in the formation of these groups?
A. chondrocytes II type
B. chondroblast
C. prehondroblasty
D. chondrocytes type I *
E. chondrocytes type III

619. In the development of clinical manifestations of allergy leading role played by histamine. Which cell is it made?
A. macrophages
B. T lymphocytes
C. mast cells *
D. B-lymphocytes
E. plasmocytomas

620. In one experiment selectively stimulated cell populations from blood. As a result, significantly increased vascular permeability, causing the formation of edema, perivascular tissue and slowing down the process of blood clotting. What are the blood cells stimulate the subject?
A. lymphocytes
B. red blood cells
C. platelets
D. eosinophils
E. basophils *

621. When wound healing at the site of the defect developing connective tissue scar. Which cells provide this process?
A. fibroblasts
B. macrophages
C. fibroblasts *
D. mast cells
E. melanocytes

622. The patient in the clinic in the survey found a sharp decrease in hemoglobin. What is the function of the blood at the same time reduced?
A. safety
B. humoral
C. homeostatic
D. respiratory *
E. trophic

623. Smear the patient's blood after suffering flu detected 10% of the size of round cells 5 - 7 mm, which have a large spherical nucleus, basophilic cytoplasm colored by a narrow rim around the nucleus. What is the state of the blood they describe?
A. lymphopenia *
B. thrombocytopenia
C. leukopenia
D. lymphocytosis
E. monotsitopeniya

624. After prolonged inflammation of the mucous membrane of the nasal cavity of the patient are observed changes in the epithelium. What epithelium experienced changes?
A. simple squamous
B. a single-layer multi-row *
C. stratified squamous
D. multilayer cubic
E. multi-layered cylindrical

625. During training the athlete was injured lower limb. Doctor traumatologist set diagnosed with tendon rupture. What type of connective tissue is formed by a tendon?
A. the dense fibrous connective tissue unformed
B. the dense fibrous connective tissue executed *
C. loose connective tissue
D. reticulum
E. cartilage tissue

626. In the study A patient blood smear revealed cells that make up 5% of total leukocytes and are S-shaped curved core metahromatichno colored granules in the cytoplasm. Name these cells.

A. lymphocytes
B. neutrophils
C. eosinophils
D. monocytes
E. basophils *

627. Histochemical study revealed an inflamed umbilical increased activity of hyaluronidase. How does this affect the permeability of the main substance of the mucous tissue of the umbilical cord?
A. it does not affect
B. increases the permeability *
C. reduces the permeability
D. slow down metabolism
E. the substance is sealed

628. Histochemical study leukocyte blood smear detected in the cytoplasm of cells which are granules containing histamine and heparin. What are cells?
A. monocytes
B. neutrophils
C. eosinophils
D. basophils *
E. red blood cells

629. In histological sections of lymph node experimental animal after antigenic stimulation in the brain strands found a large number of cell morphology: intensely basophilic cytoplasm, eccentrically located nucleus, cytoplasm light area near it, chromatin is in a "wheel spokes". What are cells?
A. plasma cells *
B. macrophages
C. fibroblasts
D. adipocytes
E. tissue basophils (mast cells)

630. Under the influence of radiation injured cells of the basal layer of the epidermis. What is the function of the latter weaken or slow down in the first place?
A. safety
B. regenerator *
C. barrier
D. suction
E. dielectric

631. As a result of the study of blood spots at the crime scene forensic expert determined that the blood of women. On what grounds?
A. availability of satellites nuclei in neutrophils *
B. availability and macrocytes microcytes
C. manifestation poikilocytosis
D. the presence of specific granules in eosinophils
E. according to the number of red blood cells

632. In histological specimen of loose connective tissue found relatively large cells filled with basophilic metachromatic grit; histochemically it determined that the granules contain heparin and histamine. What are these cells?
A. adipocytes
B. fibroblasts

C. macrophages
D. plasma cells
E. tissue basophils (mast cells) *

633. In the analysis of X-rays of the patient 57, the doctor drew attention to the local resorption of hard tissues of individual bones. With the increased activity of some cells may be associated with these changes?
A. osteocytes
B. chondroblast
C. osteoclasts *
D. osteoblasts
E. chondrocytes

634. The child (10 years) was found bot. What changes in the leucocyte count may be expected?
A. increase the number of basophils
B. increase the number of platelets
C. increase the number of red blood cells
D. increase the number of segmented neutrophils
E. increase the number of eosinophils *

635. Experimental animals administered a substance that disrupts the formation of collagen fibers. How will this affect the properties of the tendon?
A. decrease the tensile strength and elasticity
B. do not change
C. decrease elasticity
D. decreases the tensile strength *
E. increased strength, reduced flexibility

636. An examination of a patient 26 years conducted histological examination of bone marrow punctate and found a significant reduction in the number of megakaryocytes. How will this affect the ratio of the formed elements of the peripheral blood?
A. reduce the number of neutrophils
B. reduce the number of red blood cells
C. reduce the number of eosinophils
D. reduce the number of platelets *
E. reduce the number of B-lymphocytes

637. In the study of connective tissue histopreparation revealed neutrophils. What function do these cells in connective tissue?
A. the support
B. trophic
C. phagocytosis of microorganisms *
D. adjust the contraction of smooth muscle cells
E. dilates blood vessels

638. The skin has got a foreign body, which led to the inflammation. Connective tissue cells which are involved in skin reaction to a foreign body?
A. neutrophils, macrophages, fibroblasts *
B. macrophages
C. melanocytes
D. lipocytes

E. adventitial cells

639. The tissue specimen is diagnosed, in which the cells are placed singly and isogroup and in intercellular substance not visible fibrous structure. What tissue is present in the product?
A. fibro cartilage
B. smooth muscle tissue
C. epithelial tissue
D. hyaline cartilage *
E. bone

640. In histological specimen of cortical bone at the fracture site revealed signs of regenerative processes (corn). What fabric forms this structure?
A. coarse fiber bone *
B. loose connective tissue
C. reticulum
D. epithelial tissue
E. lamellar bone

641. In preparation of red bone marrow defined clusters of giant cells, arranged in close contact with sinusoids. What are blood cells that are derived from these cells.
A. lymphocytes
B. red blood cells
C. white blood cells
D. monocytes
E. platelets *

642. One of the rules has surgery incision along the so-called Langer's lines (lines of skin tension). Which of the below mentioned fabrics form a network - the most robust dermis?
A. the dense connective tissue decorated
B. the reticular connective tissue
C. the loose connective tissue
D. epithelial tissue
E. dense irregular connective tissue *

643. To determine the functional activity of the blood cells in the tube, which contains leukocyte weight mixture of microorganisms is introduced. Name cells in the cytoplasm of which are found phagocytized microbes.
A. neutrophils and monocytes *
B. the lymphocytes and basophils
C. lymphocytes and eosinophils
D. monocytes and lymphocyte
E. E.lymphocytes and neutrophils

644. In a blood smear stained with Romanovsky-Giemsa behind, there is a 20% larger (diameter 20 mm), round cells with weakly basophilic bean-shaped nucleus and cytoplasm. Clinically, this phenomenon is described as:
A. lymphocytosis
B. monocytosis *
C. leukopenia
D. neutrocytosis
E. reticulocytosis

645. The clinic admitted patients diagnosed with a fractured collarbone. What are the cellular elements take part in the regeneration of bone tissue?
A. osteocytes
B. osteoclasts
C. osteoblasts *
D. chondrocytes
E. fibroblasts

646. The patient, a nurse by profession, complains about the damage to the skin of the hands that resemble eczema. She noticed that when on duty in the hospital, when she has to do sick injections of streptomycin, increased itching, watery blisters appear. During holidays signs of disease disappear. On suspicion of an allergic condition was made CBC. Increasing the number of what cells will be observed in this patient?
A. basophil leucocytes *
B. eosinophils
C. monocytes
D. neutrophils
E. lymphocyte

647. In the emergency station asked a patient with an open fracture of the index finger? First aid. Which of the injured tissue regenerates fastest?
A. nervous tissue
B. connective tissue
C. striated muscle tissue
D. bone
E. the epidermis of the skin *

648. A child 6 years of age diagnosed with parasitic infestation. What changes can be expected leukocyte?
A. increasing the number of eosinophils *
B. expanding the number of neutrophils
C. reducing the number of eosinophils
D. increasing the number of monocytes
E. the increase in the number of lymphocytes

649. The working of the enterprise, which produces a vanadium compound, found increased bone formation by increasing the amount of calcium in the bone. The activity of any cell it can be connected?
A. osteocytes
B. osteoblasts *
C. osteoclasts
D. chondrocytes
E. fibroblasts

650. In the fall of a child put off leather palm. What epithelium was damaged at the same time?
A. multilayer not keratinizing
B. the multilayered keratinizing *
C. a single layer low prismatic
D. transition
E. simple squamous

651. As a result of contact with the compounds in the production of chromium originated in women allergic dermatitis on both arms. What are the skin cells predominantly participated in the implementation of this disease?
A. tissue basophils *
B. plasma cells
C. macrophages
D. neutrophils
E. lymphocytes

652. The patient is detected resorption (resorption) bones. With the increased activity of any cells of bone is connected?
A. osteocytes
B. osteoblasts and osteoclasts
C. osteocytes and osteoblasts
D. osteoblasts
E. osteoclasts *

653. In the analysis of the blood of the patient parasitic disease (parasitic infestation) revealed an increase in the blood:
A. erythrocytes
B. lymphocytes
C. monocytes
D. basophils
E. eosinophils *

654. Clinical examination of the patient 70 years found a violation of motor function that is associated with age-related changes in the hyaline cartilage. What age changes caused limitation of movement?
A. deposition of calcium salts in the intercellular substance *
B. increasing the number of isogenic groups
C. increase the number of cartilage cells
D. thickening perichondrium
E. increased hydrophilicity basic substance

655. The student is invited to two drugs. On the ground - elastic cartilage (painted orseinom), the second - hyaline (stained with hematoxylin-eosin). On what grounds they can be distinguished?
A. by the presence of isogenic cell groups
B. by the presence of elastic fibers *
C. by the presence of the young band of cartilage
D. by the presence of perichondrium
E. in the presence of amorphous material

656. In the analysis of blood found reduced hemoglobin. What is the function of the blood while respecting?
A. transport of hormones
B. gas transportation *
C. securing immunity
D. clotting
E. transport of nutrients

657. During the forensic examination of the blood sample in the neutrophils on the surface of one of the core segments of chromatin appears as a drumstick. What do you call a structural formation?
A. taurus Lyon
B. barr body *
C. decondensed chromatin
D. euchromatin
E. taurus Pachchini

658. The patient has pneumonia in the general analysis of blood found to increase the total number of white blood cells. What do you call this phenomenon?
A. leukopenia
B. anemia
C. leukocytosis *
D. anisocytosis
E. poikilocytosis

659. The blood of men 26 years found 18% of red blood cells spherical, flattened and process forms. More red blood cells were in the form of biconcave disks. What do you call such a phenomenon?
A. pathological poikilocytosis
B. physiological poikilocytosis *
C. physiological anisocytosis
D. pathological anisocytosis
E. erythrocytosis

660. The patient's blood was found 15% erythrocyte 8mkm diameter greater than 12,5% of erythrocytes of less than 6 microns. The remaining erythrocytes have a diameter of 1 - 9 microns. What do you call such a phenomenon?
A. pathological poikilocytosis
B. physiological poikilocytosis
C. physiological anisocytosis *
D. pathological anisocytosis
E. erythrocytosis

661. In studying the flushing of the wound of the patient with acute wound healing process tibia found a large number of cells of irregular elongated shape, dense nucleus in the cytoplasm basophilic which contains many lysosomes, phagosomes, pinocytosis vesicles.
A. plasma cells
B. fibroblasts
C. fibroblasts
D. macrophages connective tissue *
E. tissue basophils

662. Indirect histogenesis of bone tissue of long bones between epiphyseal and diaphyseal ossification center forms the plate, which further provides a bone growth in length. What do you call this structure?
A. osteon
B. bone cuff
C. bone plate
D. metaphyseal plate *
E. interior general plates

663. In the study of blood smear the person with the presence of inflammatory process can be seen a large number of round cells with a segmented nucleus (three or more segments) and small pink-purple grain in the cytoplasm. What are cells?
A. basophil granulocytes
B. red blood cells
C. eosinophilic granulocytes
D. neutrophils *
E. lymphocytes

664. Inflammation is characterized by the expansion of blood capillaries in the area of damage, a decrease in blood flow, increased permeability of the vessel walls. Which of the cells below, primary role in this?
A. macrophages
B. fibroblasts
C. plasmocytomas
D. eosinophils
E. basophils *

665. In the clinical setting in a patient diagnosed with the injury of leg muscles. Fabric regenerates slowly due to:
A mitotic division miosatellitocytes *
B. fission of nuclei of muscle fibers
S. division and differentiation of fibroblasts
D. increasing the number of myofibrils
E. increasing the number of sarcoplasmic

666. In the emergency station delivered to the patient with damage to the muscles of the lower extremities. Due to which cells can be reparative regeneration of muscle fibers and the resumption of muscle function?
A. myoepithelial cells
B. satellite cells *
C. S. myofibroblast
D. D. fibroblast
E. E. myoblasts

667. The preparation of histological tissue represented the main structural unit of which is a fiber that consists of symplast satellitocytes and coated overall basal membrane. For a tissue characteristic this structure?
A. skeletal striated muscle tissue *
B. smooth muscle tissue
C. cardiac muscle
D. loose connective tissue
E. reticulum

668. In the phase of myocardial contraction (systole) in the cardiomyocyte sarcoplasm dramatically increases the concentration of calcium ions. What structures are involved in the deposit of calcium ions?
A. T - system
B. lysosomes
C. ribosomes
D. l-system *

E. nucleoli

669. The figure shows schematically the structural unit of the myofibril of striated muscle - sarcomere, which is contained between two adjacent lines-Z. As changes in the maximum reduction of H-Zone sarcomere?
A. disappears *
B. do not change
C. doubles
D. halved
E. occupies the entire sarcomere

670. It is known that calcium ions, along with other factors, provide a reduction in muscle tissue. What are the structures of the calcium during contraction?
A. protein actin thin fibrils
B. protein myosin thick fibrils
C. protein troponin fine fibrils *
D. actomyosin complex sarcolemma
E. protein calsecvestrine

671. In conditional experiment the action of toxic substances violates the mechanism of transmission of nerve impulses. What structure ensures that this function?
A. neurolemma
B. synapse *
C. neurofibrils
D. mitochondria
E. nissl substance

672. In traumatic injuries of the upper extremities may develop degeneration of nerve fibers, which is accompanied by breakage of axons, the disintegration of the myelin. Due to some neural structures takes place at the resumption of myelin regeneration?
A. neurolemmocytes (Schwann cells) *
B. mezaxon
C. perineurium
D. endoneurium
E. astrocytome

673. In the study of striated muscle fibers after the action of hydrolytic enzymes observed the destruction of thin myofilaments. What structures suffered damage?
A. actin myofilaments *
B. myosin filaments
C. epitheliofibril
D. tropocollagen complexes
E. nucleoprotein complexes

674. As a result of myocardial infarction took the damaged areas of the heart muscle, which is accompanied by a massive loss of cardiomyocytes. What are the cellular elements provide a replacement of a defect in the structure of the myocardium?
A. epitheliocytes
B. cardiomyocytes
C. miosatellitocytes
D. fibroblasts *
E. smooth muscle cells

675. In the study of striated muscle fibers after mechanical injury observed the destruction of thick myofilaments. Where are localized pathological changes?
A. the drive of I
B. the disk A *
C. in the half drive A
D. in the disk A and disk I
E. in the middle of disk I

676. During emotional arousal heart rate of a person 30 years reached 112 per minute. Which department of cardiac conduction system is responsible for this change?
A sinoatrial node *
B. bundle Hisse
S. bundle branch block
D. Purkinje fibers
E. atrioventricular node

677. A newborn diagnosed developmental disorder ventricular myocardium. In violation of the embryonic development of this pathology is linked to the source?
A. ectoderm
B. endoderm
C. visceral splachnopleury *
D. mesenchyme
E. parietal splanchnopleury

678. Histological preparation of the heart wall between the endocardium and the myocardium showed large cells with clear cytoplasm and eccentrically placed core. What are cells?

A. Purkinje cells *
B. contractile cardiomyocyte
C. endocrine cells
D. pacemaker cell
E. lipocytes

679. In the preparation of human bone marrow defined clusters of giant cells, which are in close contact with sinusoids. What are the blood cells are formed from these cells?
A. platelets *
B. red blood cells
C. lymphocytes
D. white blood cells
E. monocytes

680. When studying skin biopsy composed dermis detected vessels which contain a thick layer of smooth muscle cells in the tunica media. What are the names of these vessels?
A. the arteries of muscular type *
B. arteriolar-venular anastomoses
C. capillaries
D. arterioles
E. venules

681. The specific function of these organs of the least dependent on the influence of the autonomic nervous system?

A. intestine
B. in heart
C. bladder
D. skeletal muscle *
E. salivary gland

682. The year after subtotal gastrectomy for ulcer lesser curvature changes are detected in the laboratory analysis of the blood: anemia, leuko- and thrombocytopenia, color index - 3, and the presence of megaloblasts megalocytes. Deficiency of factors leading to such changes?
A. biermerin
B. gastrin
C. pepsin
D. hydrochloric acid *
E. mucin

683. As a result of artery thrombosis occurred the death of the group of contractile cardiomyocytes (heart attack). At the expense of what cells will mostly occur reparative regeneration in the area of damage?
A. fibroblasts *
B. cardiomyocytes that have been preserved
C. myosymplast
D. miosatellitocytes
E. smooth muscle cells

684. Arteries large caliber during systole stretched and returned to its original state during diastole, ensuring the stability of the blood flow. The presence of some elements of the vessel wall can this be explained?
A. collagen fibers
B. muscle fibers
C. reticular fibers
D. elastic fibers *
E. a great number of fibroblasts

685. The histological preparation vessels revealed that start blindly have the form of flattened endothelial tubes contain basement membrane and pericytes, vascular endothelium of the filaments stropnymi fixed to the collagen fibers of connective tissue. What are these vessels?
A. hemocapillars
B. limphocapillary*
C. arterioles
D. venules
E. arteriolar-venular anastomoses

686. The electron clearly defined fenestrate capillary endothelium and basement membrane pores. What type of capillary?
A. sine *
B. somatic
C. visceral
D. atypical
E. shunt

687. The slides presented wall of the heart. In one of the shells are contractile, secretory and conducting myocytes, endomysium with blood vessels. What a shell and some parts of the heart belong to these structures?
A. atrial myocardium *
B. ventricular endocardial
C. epicardium of the heart
D. adventitia
E. pericardial

688. A patient 40 years old had a heart attack. Due to some morphological components held the regeneration of the heart wall?
A. proliferation of connective tissue cells *
B. intracellular regeneration of contractile cardiomyocytes
C. proliferation of contractile cardiomyocytes
D. conductive proliferation of cardiomyocytes
E. proliferation of contractile cardiomyocytes and conductive

689. In histological specimen vessel is well defined internal and external elastic membrane and has a lot of muscle cells in the tunica media. What kind of vessel in question?
A. artery of mixed type
B. artery of muscular type *
C. vein with the strong development of muscular elements
D. elastic arteries
E. Extra organic lymphatics

690. Poison spiders and snakes, which contain hyaluronidase, easily penetrate through the wall of the capillaries. What kind of a structural component linked to the permeability of the capillary walls?
A. pericytes
B. fenestra
C. the layer glycoproteins, which are covered with endothelial cells
D. basement membrane *
E. adventitial cells

691. In a study of biopsy skin dermis composed discovered vessels which contain a thick layer of smooth muscle cells in the tunica media. What are the names of these vessels?
A. the arteries of muscular type *
B. capillaries
C. arterioles
D. venules
E. arteriolar-venular anastomoses

692. In the electron micrograph of a fragment of the intima detected cells that lie on a basal membrane and connected together by tight junctions and desmosomes. Name these cells.
A. mesothelium
B. the endothelium *
C. the epidermis
D. reticular cells
E. macrophages

693. The histological preparation contains organ of the cardiovascular system. One of its shells formed anastomoses between a fiber consisting of cells that form the contact locations intercalated

disks. Sheath which body is represented in the preparation.
A. the aorta
B. artery of muscular type
C. heart *
D. vein muscular type
E. artery of mixed type

694. In the wall of blood vessels and the heart wall are several shells. Which of the heart membranes of histogenesis and tissue composition similar to the vascular wall?
A. myocardium
B. endocardium *
C. pericardium
D. epicardium
E. the epicardium and myocardium

695. Is characterized by a fenestrated capillary endothelial basement membrane and porous. What is the type of capillary?
A. a blood
B. somatic
C. visceral
D. sine *
E. lymphatic

696. The patient pericarditis in the pericardial cavity serous fluid accumulates. With the disruption of the cells of the pericardium any linked this process?
A. the cells of the mesothelium *
B. endothelial cells
C. smooth muscle cells
D. fibroblasts
E. macrophages

697. In preparation of the spleen revealed vessel wall which consists of the endothelium to the basement membrane, tunica missing, the outer shell fused with layers of connective tissue of the spleen. What is this vessel?
A. vein muscular type with the weak development of muscular elements
B. veinamyous type *
C. artery of muscular type
D. arteriole
E. elastic arteries

698. In animal experiments studied a piece of soft tissue hip 2 weeks after the incision of the skin and muscles. Found newly formed blood vessels. What structures of the vascular wall to provide education of the capillaries at the site of injury?
A. the proliferation of pericytes
B. the proliferation of endothelial cells *
C. adventitial cell proliferation
D. hypertrophy fibroblasts
E. proliferation of mast cells

699. Examined histologically drug aortic man's body 74 years. What can detect age-related changes in the aortic wall?
A. the growth of collagen fibers in the inner and middle membranes *

B. the growth of elastic fibers in the tunica
C. the proliferation of smooth muscle cells in the tunica
D. hypertrophy of smooth muscle cells in the tunica
E. proliferation of endothelial

700. In the experiment, the embryo of the animal destroyed visceral mesoderm sheets that are adjacent to the mesenchymal tubes. The development of any structures of the heart will be broken?
A. infarction and endocardial
B. myocardium and epicardium *
C. epicardial and endocardial
D. endothelial and endocardial
E. epicardial mesothelium

701. In the electron micrograph shows the cell wall of the heart muscle nature of process forms with the weak development of myofibrils and well-developed granular ENP and the Golgi complex. In the cytoplasm, revealed numerous secretory granules. Which cell is?
A. ventricular cardiomyocyte contractile
B. atrial cardiomyocyte *
C. P-cell
D. smooth myocyte
E. Purkinje cells

702. The patient entered the clinic with a tangential gunshot wound to the pericardium. What epithelium is damaged due to injury?
A. single-layer cubic
B. simple squamous *
C. simple columnar
D. stratified squamous keratinizing
E. stratified squamous not keratinizing

703. I.M Sechenov called arterioles "taps" of the cardiovascular system. What structural elements provide the function of arterioles?
A. longitudinal myocytes
B. circular myocytes *
C. elastic fibers
D. the longitudinal muscle fibers
E. collagen fibers

704. In the wall of the blood vessel detected a large number of elastic fibers in all shells, fenestrated elastic membrane in the middle of the shell. What factors determine the structural features of the vessel walls?
A. large blood pressure *
B. low blood pressure
C. the majority blood velocity
D. low blood velocity
E. osmotic pressure

705. One of the membranes of the heart of histogenesis and tissue composition similar to the blood vessel wall. What is the source of their development?
A. somites
B. splanchnotom
C. endoderm

D. ectoderm
E. mesenchyme *

706. On histological preparation the blood vessel. The inner shell is composed of the endothelium and internal elastic under endothelium membrane. Average shell enriched with smooth muscle cells. Indicate for a vessel characteristic data morphological features.
A. elastic arteries
B. artery of muscular type *
C. capillaries
D. vein amyous type
E. vein muscular type

707. In the electron micrograph of the capillary with a wide lumen clearly defined fenestra in the endothelium and in the pores of the basal membrane. Determine the type of capillary.
A. sine *
B. somatic
C. atypical
D. shunt
E. visceral

708. On histological preparation contains the body, the wall of which is formed in three shells. The inner shell is formed by endothelium and a thin layer of under endothelial. The outer shell is thickest. Specify which body is represented in the preparation?
A. uterus
B. artery
C. esophagus
D. heart
E. vein *

709. Atrial myocardium in histochemical studies revealed cardiomyocytes which comprise granules are rich in glycoproteins. Specify what type of cells are cardiomyocytes these?
A. secretory *
B. contractile
C. P-cells
D. Purkinje cells
E. transitional cells

710. Microscopic examination of the heart stillbirth observed changes in cardiomyocytes. Violation of any embryonic sources has led to these changes?
A myotomy
B. mioepikardial plate *
C. endoderm
D. ectoderm
E. mesenchyme

711. During the development of atherosclerotic lesions in patients, changes occur in the blood vessels of the lower extremities. On histological preparation of the vessel is well defined interior and exterior elastic membrane in the middle of a lot of myocyte membrane. What a vessel damaged in this disease?
A. lymphatic vessels

B. elastic arteries
C. artery of mixed type
D. vein with the strong development of muscular elements
E. artery of muscular type *

712. Preparation pial vessel turns, in the wall of which there is no middle cover, the outer shell fused with the surrounding tissue, the inner shell is built from the basement membrane and endothelium. What is this vessel?
A. vein fiber type *
B. vein muscular type with the weak development of muscular elements
C. artery of muscular type
D. arteriole
E. artery of mixed type

713. At the heart slides distinguish cells of rectangular shape, with a centrally located nucleus, developed myofibrils interconnected intercalated disks. With the function of these cells is associated:
A. regenerator
B. process Pulse
C. endocrine
D. protective
E. reduction of heart *

714. At the heart slides differentiate cardiomyocytes star-shaped, with a centrally located nucleus, developed granular endoplasmic reticulum, Golgi apparatus and specific granules. With the function of these cells is associated:
A. regenerator
B. reduce
C. conduct pulse
D. protective
E. endocrine *

715. At the heart slides distinguish cells which are arranged in the form of bands of light, have a small number of myofibres inclusions and glycogen core arranged eccentrically. What are cells?
A. the contractile
B. conductive pacemaker
C. conductive transient
D. endocrine
E. Purkinje fibers *

716. In the study of the brain membranes medical examiner found a gaping vein vessels that are fused with the surrounding tissues. Name to which the veins are the vessels?
A. vein amyous type *
B. vein with the weak development of muscular elements
C. vein with an average development of muscular elements
D. vein with a strong development of muscular elements
E. venules

717. On histological preparations stained orseinom in the middle of the vessel hull found 40 to 60 fenestrated elastic membranes. Name this vessel.
A. elastic arteries *
B. artery of muscular type
C. artery of mixed type

D. vein muscular type
E. vein amyous type

718. Arterioles play an important role in the regulation of blood supply of functional units. Which of the below mentioned structures perform this function?
A. endotheliocytes
B. the external elastic membrane
C. interior elastic membrane
D. special connective tissue cells
E. myocytes *

719. Characterized by a fenestrated capillary epithelium and the basement membrane porous. What type of capillary?
A. sine *
B. somatic
C. visceral
D. lymphatic
E. gap

720. After myocardial infarction in a patient resumed morphological integrity of the wall. Due to a tissue regeneration took place?
A. nervous
B. smooth muscle
C. striated muscle
D. epithelial
E. connective *

721. Histological preparation organ parenchyma presented lymphoid tissue that forms the lymphoid nodules. Recent diffusely located and contain a central artery. What has this anatomic formation of the morphological structure?
A. red bone marrow
B. thymus
C. tonsils
D. lymph node
E. spleen*

722. Cook as a result of negligence steam burned his hand. Increasing the concentration of a substance to cause redness, swelling and tenderness of the affected area of the skin?
A. galactosamine
B. glutamine
C. histamine *
D. thiamine
E. lysine

723. Older people have an increased incidence of tumors. One of the main reasons for this:
A. reducing the intensity of antibody formation
B. increasing the frequency of violations of mitosis
C. reducing the activity of cellular immunity *
D. improved activity of cellular immunity
E. increased activity of antibody

724. In the thymus suspended formation of T lymphocytes-helpers. What immunogenesis processes that occur in connective tissues, will be violated in the first place?
A. conversion of B lymphocytes into plasma cells *
B. phagocytosis of antigens by macrophages
C. opsonisatio
D. phagocytosis of foreign bodies
E. education T lymphocyte precursors

725. Patients with large burns transplanted donor skin. But on the 8th day graft became swollen, changed its color and 11 days he started torn away. What cells take part in it?
A. B lymphocytes
B. red blood cells
C. T-lymphocytes *
D. eosinophils
E. basophils

726. A morphological study of the spleen was determined by the activation of immune reactions in the body. What are the structures of the body begins antigen depend proliferation of T-lymphocytes?
A. mantle zone of white pulp
B. red pulp
C. periarterial zone of white pulp *
D. marginal zone of white pulp
E. central zone of white pulp

727. A woman of 45 years in the period of flowering herbs diagnosed with an acute inflammatory disease of the upper respiratory tract and eyes: redness, swelling, mucus. What type of leukocytosis is the most characteristic in this case?
A. lymphocytosis
B. neutrophils
C. eozinofiliya
D. monocytosis
E. basophilia *

728. A newborn baby found thymic hypoplasia. What type of hematopoiesis is broken?
A. lymphopoiesis *
B. neytrofilopoez
C. erythrogenesis
D. monocytopoiesis
E. megakaryocytopoiesis

729. Patient 46 years and found a violation of granulocytopoiesis thrombocytopoiesis. In which of the above pathological process of happening?
A. spleen
B. lymph node
C. liver
D. thymus
E. red bone marrow *

730. Angina patient during the inspection determined a significant increase in the tonsils. What structures are involved in this process?
A stratified epithelium

B. loose connective tissue
C. crypt
D. single-layer epithelium
E. lymph nodules *

731. Patients with salivary glands hypofunction complain of xerostomia (dryness of the subjective), the increased vulnerability of the mucous membrane, frequent inflammation of bacterial and fungal origin. The level of the substance in the saliva provides a natural resistance of the mucous membrane?
A lysozyme *
B. interleukin
C. interferon
D. leukotrienes
E. erythropoietin

732. With the introduction of the patient exogenous protein drugs in the blood increases the number of antibodies that are produced by plasmocytes. Due to some blood cells plasma cells are formed?
A. T-lymphocytes
B. B-lymphocytes *
C. macrophages
D. monocytes
E. T-helper

733. What happens antigen-forming organs differentiation and proliferation of T-lymphocytes?
A. thymus
B. almonds *
C. red bone marrow
D. live
E. salivary gland

734. In the preparation of process is determined by a large cage-shaped, with invaginations on the surface, in which there are erythroblasts. What body is represented on the drug?
A. thymus
B. tonsil
C. red bone marrow
D. spleen
E. liver

735. Punctate myeloid tissue child 6 years defined cells which are in differentiation stage and removing the nucleus pyknosis. What kind of hematopoiesis, which is characterized by the phenomenon:
A. lymphopoiesis
B. neytrofilopoez
C. erythrogenesis *
D. monocytopoiesis
E. megakaryocytopoiesis

736. In the electron micrograph shows a cell makrofagicheskoy natural processes which are placed along the red blood cells at different stages of differentiation. What body is represented by?
A. lymph node

B. thymus
C. spleen
D. tonsils
E. red bone marrow *

737. Heterotransplantion organ transplant rejection found. What are the blood cells provide this process?
A. T lymphocytes - helper
B. T-killer lymphocytes *
C. T-suppressor lymphocytes
D. on lymphocytes
E. T-lymphocytes memory

738. Histopreparate represented organ stroma which forms reticulum, adipocytes, macrophages, osteogenic cells. What body is represented on the drug?
A. lymph node
B. thymus
C. spleen
D. tonsils
E. red bone marrow *

739. In the electron micrograph presented Process cell form which contains deep invaginations plasmolemma lymphocytes at various stages of differentiation. For such a body characteristic ultrastructure?
A. lymph node
B. thymus *
C. spleen
D. tonsils
E. red bone marrow

740. In preparation of the body is represented in the reticular stroma is placed mature blood cells and lymphoid nodules. What body is represented on the drug?
A. lymph node
B. thymus
C. spleen *
D. tonsils
E. red bone marrow

741. In preparation submitted to a body in which cells form three types of lymphoid structures: the lymph nodules, cords and sinuses of the brain. What body is represented on the drug?
A. lymph node *
B. thymus
C. spleen
D. tonsils
E. red bone marrow

742. In preparation of the body presented lobular structure. Stroma of epithelial cells from the body otroschatoy form. What body is represented on the drug?
A. lymph node
B. thymus *
C. spleen
D. tonsils

E. red bone marrow

743. The medulla segments forming organs on histologic specimen is lighter in color and contains epithelial cells. Which body belongs to these morphological features?
A. thymus *
B. lymph node
C. spleen
D. liver
E. kidney

744. Repeated contact with the antigen in the body begins to form antibodies. With the function of some immune cells linked this phenomenon?
A. dendritic cells
B. T - killers
C. T - suppressor
D. macrophages
E. lymphocytes memory *

745. In the experiment tagged B blood lymphocytes. The animal is injected under the skin of a foreign protein. Which cells in the connective tissue will contain the label?
A. macrophages
B. T-lymphocytes
C. plasma cells *
D. tissue basophils
E. fibroblasts

746. In the blood, the girl of 16 years, who suffers from an autoimmune inflammation of the thyroid gland, found numerous plasma cells. With the proliferation and differentiation of some blood cells associated increase in the number of plasma cells?
A. B cells *
B. T-helper
C. Tissue basophils
D. T-killers
E. T-suppressors

747. Histological examination of the biopsy of bone marrow cells found granulocytic series. Indicate any changes occur to the nucleus during the differentiation of these cells.
A. increasing the size
B. polyploidy
C. pyknosis
D. enucleation
E. segmentation *

748. In the electron micrograph of bone marrow megakaryocytes found in the peripheral zone where there are demarcation channels. What is the role of these structures?
A. cell disruption
B. increasing the surface area of the cells
C. increasing the number of ion channels
D. cell division
E. education platelets *

749. A child with impaired immune reactivity studied antigen independent proliferation and differentiation of T-lymphocytes. Punctate which body was taken for the study?
A. the thymus *
B. spleen
C. lymph node
D. red bone marrow
E. tonsils

750. The slides presented bean-shaped body, which is determined by the cortex and medulla. Cortical substance represented by the individual spherical nodules with a diameter of 5 .1 mm and the brain - brain strands. From a histological section of the body is made?
A. kidney
B. lymph node *
C. thymus
D. adrenal
E. spleen

751. It is a histological section through a lymph node. On the slides have been expanding its paracortical zone. The proliferation of the type lymph node cells led to this process?
A. macrophages
B. shore macrophages
C. plasmocytomas
D. T-lymphocytes *
E. reticulocyte

752. An examination of the patient 35, conducted histological examination of bone marrow punctate and determined a significant decrease in the number of megakaryocytes. What changes in the peripheral blood can be detected?
A. reducing the number of granulocytes
B. expanding the number of leukocytes
C. increasing the number of platelets
D. reduced platelet *
E. lowering the number of leukocytes

753. The student is given two strokes drugs. In one - the entire field is occupied by red blood cells, the second determined blood cells of different maturity. What kind of strokes?
A. the blood and lymph
B. blood and red bone marrow of human *
C. the blood of the frog and human blood
D. blood and bone marrow smear of yellow
E. smear of yellow and red bone marrow

754. The student is given two histological preparations. Both - bodies which have lymph nodules. The ground preparation - just the follicles, while the second - with an eccentrically placed follicles vessel. Determine what kind of authorities?
A. the first - the thymus, the second - lien
B. the first - red bone marrow, second - lien
C. the first - the lymph node, the second - the spleen *
D. the first - the liver, the second - the lymph node
E. the first - the liver, the second - lien

755. Burn wound closed pig skin (geterotransplantion). Call effector cells that are cut off graft (pig skin).
A. T-suppressors
B. macrophages
C. B-lymphocytes
D. T-helper cells
E. T-killers *

756. The child has a congenital immunodeficiency. It suffers cellular immunity, that leads to frequent viral infections. Disorders in which the organ most likely caused this?
A. spleen
B. bone marrow
C. lymph node
D. thymus *
E. tonsils

757. In preparation of a smear of red bone marrow myeloid cells among a number of adipocytes and found star-shaped cells with oxyphilic cytoplasm, which are in contact with their spikes. What are cells?
A. macrophages
B. fibroblasts
C. reticular cells *
D. dendritic cells
E. osteocytes

758. On histological preparation tonsil crypts are determined, the epithelium of which infiltrated leukocytes. Specify whether the epithelium is a part of the body?
A. simple columnar
B. stratified squamous not keratinizing *
C. multi-layered cube
D. stratified squamous keratinizing
E. multi-row ciliated

759. In the red bone marrow in the post-embryonic hematopoietic cells of one of the differons gradually reduced basophilia of the cytoplasm and increased oxiphilia nucleus ejected. What kind of hematopoiesis, which is characterized by such morphological changes.
A. lymphocytopoiesis
B. erythrogenesis *
C. neytrofilotsitopoez
D. eozinofilotsitopoez
E. bazofilotsitopoez

760. In histological specimen studied hematopoietic organ, which consists of different shaped lobes. In each lobe has a cortex and medulla. Which body belongs to these signs?
A. spleen
B. lymph node
C. thymus *
D. tonsils
E. vermiform appendix

761. It is known that plasma cell produces antibodies specific for the antigen. With the introduction of the antigen increases the number of plasma cells. Due to some blood cells is an increase in the number of plasma cells?
A. B cells *
B. T-lymphocytes
C. monocytes
D. basophils
E. eosinophils

762. In infectious diseases, intoxications in the lobules of the thymus increasing number reticuloepitheliocytes, Hassall corpuscles becomes wider area of the brain substance. Give the name of these changes in the thymus.
A. age involution
B. accidental involution *
C. lymphoidotoxemia
D. T immunodeficiency
E. In immunodeficiency

763. When a child vaccination in response to foreign antigens developed humoral immunity response. Describe the main spleen cells, which are involved in the response to vaccination.
A. macrophages, helper T cells, B cells *
B. T cells-killer T-helper cells
C. B-lymphocytes
D. T-suppressor cells, T-helper cells, macrophages
E. B-lymphocytes

764. Histopreparation determined body formed slices. Each slice has a cortex and medulla. Parenchyma lobes formed lymphoid tissue in which T cells are at different stages of differentiation and proliferation. The microenvironment presented epithelioreticular cells. In the medulla are Hassall's corpuscles. Which body has such a structure?
A. kidney
B. thymus *
C. lymph node
D. adrenal
E. spleen

765. In order to diagnose a patient man took parenchyma forming organs, where they found megakaryocytes. Which of the following is an organ?
A. red bone marrow *
B. spleen
C. thymus
D. lymph node
E. almonds

766. In the red bone marrow cells developing blood islands are located. Some islands associated with macrophages. What are the blood cells develop in these islands?
A. monocytes
B. the precursors of T- and B-lymphocytes
C. the red blood cells *
D. platelets
E. basophil granulocytes

767. The patient had hemolytic anemia spleen removed, which led to oppression:
A. lymphocytopoiesis *
B. monocytopoiesis
C. leukopoiesis
D. thrombocytopoiesis
E. erythrogenesis

768. In the body of the patient had antibodies against thymosins. Differentiation of cells impaired in any patient first?
A. erythrocytes
B. B-lymphocytes
C. monocytes
D. macrophages
E. T-lymphocytes *

769. Histopreparation body with cortex and medulla. The cortical substance consists of cortical peripheral zones which are located in the lymph nodules, and the paracortical area. In the medulla determined brain, sinuses and trabeculae. Which authority has the morphological features?
A. lymph node *
B. adrenal
C. spleen
D. thymus
E. kidney

770. On histological preparation organ parenchyma presented lymphoid tissue that forms lymph nodules. Recent placed diffusely and comprise a central artery. Which anatomical organ has the morphological structure?
A. spleen *
B. tonsils
C. lymph node
D. thymus
E. red bone marrow

771. On the slides of bone marrow defined numerous capillaries through the wall into the bloodstream which overlook mature blood cells. What kind of belong to these capillaries?
A. sine *
B. fenestrated
C. somatic
D. visceral
E. lymphatic

772. Under the influence of unfavorable factors in the thymus is changing the body, which is accompanied by a massive loss of thymocytes their eviction in peripheral organs, proliferation epithelioreticulocytes. What do you call this phenomenon?
A. atrophy of the thymus
B. the age involution of the thymus
C. wasting thymus
D. dystrophy thymus
E. accidental involution of the thymus *

773. At histological examination of the thymus men aged 40 to determine the decrease of the parenchymal components of the thymus, proliferation of fat and loose connective tissue, increasing

the number of thymic cells at a constant total weight of the body. What do you call such a phenomenon?
A. accidental involution of the thymus
B. age of thymic involution *
C. wasting thymus
D. dystrophy thymus
E. atrophy of the thymus

774. Newborn found congenital atrophy of the thymus. Which cells of the immune system will suffer most?
A. B-lymphocytes
B. T-lymphocytes *
C. macrophages
D. antigen-presenting cells
E. memory B cells

775. Recovery of the body from infectious disease antigens followed by neutralization with specific antibodies. Which cells are produced?
A. plasma cells *
B. fibroblasts
C. tissue basophils
D. eosinophils
E. T-lymphocytes

776. At the 4-month-old baby pronounced manifestations of rickets. The child is in the sun a lot, getting vitamin D3, but the manifestation of rickets have not decreased. Violation of the synthesis of the substance can be attributed to the development of rickets?
A. calcitonin
B. insulin
C. thyroxine
D. calcitriol *

777. Patient 55 years, there has been an endocrinologist about reducing the amount of hormone glucagon in the blood. Any function of pancreatic cells disrupted in this case?
A. A-cells of islets of Langerhans *
B. PP-islet cell
C. C-cells of islets of Langerhans
D. D1-islet cell
E. D-islet cell

778. At a doctor's appointment came to the patient is very tall, with long, thick fingers, a large jaw and a protruding lower lip. Increased secretion of the hormone which cancer can be suspected?
A. growth hormone of the anterior pituitary *
B. thyroid hormones
C. ADH posterior pituitary
D. gonadotropin-releasing hormone of the anterior pituitary
E. adrenal hormones from the group of glucocorticoids

779. A woman of 53 years, height 163 cm, weight 93 kg, uniform deposition of fat, his face puffy, sedentary, apathetic. Impaired function due to a cancer patient's condition?
A. adrenal
B. sexual

C. parathyroid
D. thyroid *
E. pituitary

780. X-ray examination of the skull base bones found to increase the cavity sella, the destruction of different parts of the cells. A tumor of the endocrine gland can cause a destruction of the bone?
A. pituitary *
B. the thymus
C. adrenal
D. thyroid
E. epiphysis

781. The patient who received glucocorticoids for a long time, as a result of drug withdrawal occurred exacerbation of existing disease, lower blood pressure, weakness. How can we explain this phenomenon?
A. ACTH overproduction
B. addictive to the drug *
C. sensitization
D. cumulation
E. The occurrence of adrenal insufficiency

782. The method of indirect calorimeter revealed that the basal metabolic rate of the test is 40% lower due. Violation of any activity of the endocrine glands is causing this?
A. adrenal
B. thyroid *
C. epiphysis
D. thymus
E. pancreas

783. The patient has advanced years have seen an increase and thickening of fingers, nose and lower jaw. With the increasing isolation of the hormone linked these violations?
A. insulin
B. ACTH
C. growth hormone *
D. thyrotropin
E. parathyrin

784. A person reduced urine output, hypernatremia, hypokalemia. Hypersecretion of the hormone may be causing these changes?
A. vasopressin
B. atrial natriuretic factor
C. parathyrin
D. aldosterone *
E. epinephrine

785. Histopreparation presented parenchymal organ. The parenchyma is composed of a large number of follicles, which is formed by a layer of the wall cubic glandular cells. In the lumen of the follicles accumulates colloid. Which body is characterized by such morphological features?
A. thyroid *
B. ovary
C. lymph node
D. pituitary

E. adrenal

786. In a patient with kidney disease, which is accompanied by ischemia parenchyma, there is a high level of blood pressure. Which factor is the leading cause of increased blood pressure in this patient?
A. the excess of angiotensin II *
B. the excess of antidiuretic hormone
C. increase in cardiac output
D. improved sympathetic tone
E. hypercathecholemia

787. A man aged 42, who has long been in a state of stress in urine significantly increased the contents of 17-ketosteroids, which primarily indicates an increase in the secretion of:
A. cortisol
B. estradiol
C. epinephrine *
D. norepinephrine
E. aldosterone

788. On examination, 10-year-old child set short stature, a disproportionate development of the body, insufficient mental development. Deficiency of the hormone in the body has caused these changes?
A. oxytocin
B. parathyrin
C. tireokaltsiotonina
D. adrenocorticotropic hormone
E. thyroxine *

789. Ultraviolet rays human skin darkening that is a protective reaction. What is the protective substance is synthesized in the skin under the influence of this factor?
A. DNA
B. tryptophan
C. melanin *
D. arginine
E. vitamin D

790. The patient with the syndrome of Cushing's in the blood increased levels of cortisol. With pathology of the endocrine glands is that?
A. adrenal cortex *
B. adrenal medulla
C. pancreas
D. pituitary
E. thyroid

791. The patient on the third day after total thyroidectomy convulsions. What drugs should appoint this patient?
A. the preparation of calcium *
B. anticonvulsants
C. sedatives
D. antipsychotics
E. preparation of potassium

792. As a result of intensive perspiration and dehydration in the patient has increased urine osmolality and decreased urine output. Changing the selection of hormone provides primarily compensatory water retention?
A. insulin
B. aldosterone *
C. corticosterone
D. thyroxine
E. antidiuretic hormone

793. Parenchyma body forms dense tangles formed endocrinocytes. Which body is characterized by this structure?
A lymph node
B. spleen
C. kidneys
D. adrenal *
E. pancreas

794. On examination, adult height was 100 cm for the proportional structure and normal mental development. For the lack of production of a hormone characteristic of these signs?
A. thyroxine
B. STH *
C. antidiuretic hormone
D. mineralocorticoid
E. HCG

795. The patient 23 years complains of a headache, change in appearance (increasing the size of the feet, hands, facial), deepening of voice, memory impairment. The disease started three years ago, for no apparent reason. Analysis of urine without any changes. The reason for such a state can be:
A. the lack of aldosterone
B. hyperproduction corticosteroids
C. the lack of thyroxin
D. hyperproduction somatotropin *
E. lack of glucagon

796. The growth of a child 10 years reaches 178 cm., Weight - 64 kg. With the disruption of the endocrine glands what is the reason?
A. gonads
B. adrenal glands
C. parathyroid
D. pituitary *
E. thyroid

797. Female 44 years old complaining of general weakness, pain in the heart. Objectively: a crescent-shaped face, hirsutism, BP-165/100 mm Hg. Art., height 164 cm, weight-103 kg, preferential accumulation of fat in the neck, upper shoulder girdle, the abdomen. What is the main cause of obesity in women?
A. decrease in production of thyroid hormones
B. reduced production of glucagon
C. increased production of glucocorticoids *
D. improved insulin production
E. increased production mineralocorticoid

798. In animal experiments were damaged neural pathways, which are held in the pituitary stalk. Admission to any hormones blood was violated?
A. pituitary hormone
B. vasopressin and oxytocin *
C. anterior pituitary hormones
D. thyrotropin
E. adrenocorticotropic hormone

799. Female 25 years old in a month after childbirth went to the doctor complaining of decrease in the amount of milk. Reducing the formation of hormones led to such a state?
A. prednisolone
B. insulin
C. thyroxine
D. prolactin *
E. parathyrin

800. When a biopsy of the thyroid gland in the preparation determined thyrocites cylindrical colloid rarefied vacuolated. What gland dysfunction observed in this patient?
A. normofunction
B. hypofunction
C. hyperactivity *
D. atrophy
E. hypertrophy

801. In the practice of modern obstetrics introduced a rule - first feeding newborn conduct immediately after birth. Receipt of a hormone in the blood to accelerate the postpartum period?
A. antidiuretic hormone
B. aldosterone
C. oxytocin *
D. vasopressin
E. insulin

802. Of the ectodermal epithelium lining the top of the oral pit human embryo is formed Rathke's pouch, which is sent to the base of the future of the brain. What develops from this embryonic germ?
A. neurohypophysis
B. adenohypophysis *
C. median Eminence
D. pituitary leg
E. anterior hypothalamus

803. In the wall of the follicles and interfollicular interlayers of connective tissue in the area of the thyroid gland placed great endocrinocytes, secretory granules which osmio- and argyrophilic. Name these cells.
A. pituitary cells
B. thyrocites
C. paratirocytes
D. pinealocytes
E. kaltcytoninocytes *

804. Histopreparate presented parenchymal organ, the surface layer of the cortex which forms tangles formedendocrinocytes. Which body belongs to the morphological feature?
A. ovary

B. lymph node
C. spleen
D. thyroid
E. adrenal *

805. It is known that aldosterone regulates sodium content in the body. Which cells of the adrenal glands produce this hormone?
A. cells netted area
B. epinefrocytes
C. the cells were glomerular zone *
D. cells beam area
E. norepinefrocytes

806. We observed an endocrinologist patient, 40 years old, who has found insufficient function of the adrenal cortex, which is evident decline of the hormone aldosterone in the blood. The function which cells of the adrenal cortex is broken?
A. cells beam area
B. cell glomerular zone *
C. cells netted area
D. cells sudanophob area
E. cell X-Zone

807. Cessation of bleeding after birth due to the action of oxytocin on the uterine wall. What a shell body reacts to the action of this hormone?
A. value
B. endometrium
C. perimeter
D. myometrium *
E. submucosa

808. Histological sections from one of the endocrine glands are seen rounded structures of different sizes, one wall of which is formed by a layer of epithelial cells to the basement membrane within these structures contain acellular homogeneous mass. What is iron?
A. parathyroid
B. adrenal glands cortex
C. thyroid *
D. anterior pituitary
E. the back lobe of the pituitary

809. Experimental animal emits large amounts of urine (polyuria), and experiencing intense thirst (polydipsia). Urine contains no sugar. With no cell dysfunction is the reason?
A. neurosecretory hypothalamic supraoptic nucleus *
B. follicular thyroid endocrinocytes
C. paratirocytes
D. endocrinocytes glomerular zone of the adrenal glands
E. endocrine adrenal medulla

810. The patient 42 years after resection of the thyroid gland convulsions. Relief occurs if calcium supplements. Violation of the endocrine glands what causes this condition?
A. pituitary
B. adrenal
C. ovary

D. parathyroid *
E. epiphysis

811. A woman of 40 years of weak labor due to the weakness of the contractility of the myometrium. What hormonal drug be administered to help her?
A. aldosterone
B. hydrocortisone
C. dexamethasone
D. oxytocin *
E. prednisolone

812. The patient 30 years old was found hyperthyroidism. What form thus has thyrocites follicles?
A. the cubic
B. polygonal
C. the flat
D. spindly
E. prismatic *

813. The patient was 40 years old, went to the doctor complaining of tachycardia, exophthalmos, and increased fatigue, decreased body weight. With increasing function which cells most likely it can be connected?
A. paratirocytes
B. thyrocites *
C. parafollicular cells
D. APUD cell
E. acidophilus endocrinocytes

814. On histological preparation endocrine determined epithelial strands that consist of chromophilic (acidophilic, basophil) and chromophobe cell. What body is represented on the drug?
A. epiphysis
B. adrenal
C. neurohypophysis
D. thyroid
E. adenohypophysis *

815. In histological specimen presented parenchymal organ that has the cortex and medulla. Cortical substance formed by strands of epithelial cells, between which the blood capillaries. Strands forming three zones. The medulla is formed chromafficytes and venous sinusoids. Which authority has the morphological features?
A. kidney
B. the adrenal glands *
C. lymph nodes
D. thymus
E. thyroid

816. In histological specimen presented parenchymal organ of the endocrine system, which consists of three parts: the front, middle, back. The parenchyma of the anterior lobe formed epithelial trabeculae, which are surrounded by sinusoids. As part of the trabecular are chromophilic (basophilic and acidophilic) and chromophobe cells. Identify the body that has the morphological features.
A. epiphysis
B. pituitary *

C. the adrenal glands
D. thyroid
E. ovary

817. When one study of remote operation during the adrenal found large cells, which are impregnated with a solution of potassium dichromate. What is a hormone synthesized by these cells?
A. epinephrine *
B. aldosterone
C. secretin
D. thyroxine
E. cholecystokinin

818. In histological specimen presented parenchymal organ of the endocrine system. Structural and functional unit of the body of a follicle. The wall is formed by the follicle cells of a cube-shaped cavity filled with follicular colloid. What body is represented in the preparation?
A. ovary
B. pituitary
C. thyroid *
D. salivary gland
E. testis

819. The woman at surgery for cancer of the ovaries have been removed, both gonads. In this case, it happens to gonadotropic cells of the pituitary gland?
A. lysis
B. atrophy
C. necrosis
D. malignization
E. hypertrophy *

820. Histological sections from one of the endocrine glands seen follicles of various sizes, which wall is formed by one layer of cells on the basement membrane. Inside follicles contain oxyphilous homogeneous mass. What is iron?
A. parathyroid
B. adrenal
C. thyroid *
D. anterior pituitary
E. the back lobe of the pituitary

821. A woman who feeds the baby, decreased lactation. Secretory laktotsitah process is not disturbed. With the failure of the hormone is the reason?
A. prolactin
B. oxytocin *
C. progesterone
D. estrogen
E. follicle-stimulating hormone

822. To the doctor a man 45 years old with complaints of increasing the size of the hands, feet, brow, jaw and nose. A diagnosis - acromegaly. With the activation of any function of the pituitary cells is the reason?
A. somatotropocytes *
B. adrenokortikotropocytes
C. gonadotropocytes

D. tireotropocytes
E. mammotropocytes

823. The child has a proportional body came stunting. Changing the function of the pituitary gland which cells caused this condition?
A. gonadotropocytes
B. mammotropocytes
C. somatotropocytes *
D. kortikotropocytes
E. tirotropocytes

824. The patient was a long time administered high doses of hydrocortisone, causing atrophy of one of the zones of the adrenal cortex. What is the area?
A. beam and glomerular
B. glomerular
C. net
D. glomerular and netted
E. beam *

825. The patient has acromegaly an increase in the size of the hands, feet, brow, jaw and nose. With no hyperactivity pituitary cells is the reason?
A. somatotropocytes *
B. adrenocorticotropocytes
C. gonadotropocytes
D. tireotropocytes
E. mammotropocytes

826. On histological thyroid medications are determined thyrocites prismatic, growth in the number and height of microvilli, increase the number of intussusception tsitolemmy on the basal surface. For a functional state is characterized histologically by this?
A. atrophy cancer cells
B. reduction of functional activity
C. the normal function.
D. involutional secular changes
E. increased functional activity *

827. A woman in childbirth is not strong enough decreasing muscle myometrium, which manifests the weakness of labor. With no cell secretory hypofunction nuclei of the hypothalamus is the reason?
A. paraventricular nuclei *
B. arcuate nucleus
C. suprachiasmatic nuclei
D. supraoptic nuclei
E. dorsomedial nuclei

828. Describing the stress, the student made a mistake when he said that the synthesis of glucocorticoids of the adrenal cortex is stimulated by pituitary hormones. What you need to update?
A. somatotropin
B. pituitary ACTH *
C. HCG
D. mammotropinom
E. thyrotropnym hormone

829. In histological specimen among anterior pituitary endocrine cells can be seen, which is stained basophilic cytoplasm. These cells synthesize follicle-stimulating hormone and luteinizing. As these cells are called?
A. pituitary cells
B. thyrotropocytes
C. mammotropocytes
D. somatotropocytes
E. gonadotropocytes *

830. In histological specimen among anterior pituitary endocrine cells can be seen, the cytoplasm of which is painted oxyphilic. These cells produce the hormone prolactin. As these cells are called?
A. pituitary cells
B. thyrotropocytes
C. mammotropocytes *
D. somatotropocytes
E. gonadotropocytes

831. A woman of 30 years against the background of a lack of hormones found increased amounts of follicle-stimulating hormone. Which cells synthesize this hormone?
A. pituitary cells
B. thyrotropocytes
C. mammotropocytes
D. somatotropocytes
E. gonadotropocytes *

832. The patient, who is suffering for 7 years hypothyroidism, thyroid hormone deficiency is detected. What are anterior pituitary cells while you change?
A. pituitary cells
B. thyrotropocytes *
C. mammotropocytes
D. somatotropocytes
E. gonadotropocytes

833. When removing endocrine glands in experimental animals occur precocious puberty. When you remove a cancer is going on?
A. pituitary
B. epiphysis *
C. adrenal
D. thyroid
E. parathyroid

834. In histological specimen of the adrenal cortex are seen small polygonal cells that form clusters of round, and contain a small amount of lipid inclusions. What part of the adrenal gland presented on histological preparation?
A. the intermediate zone
B. glomerular area *
C. beam zone
D. net zone
E. medulla

835. On histological preparation adrenal cells showed large cubical arranged as strands, and contain large amounts of lipid inclusions. What part of the adrenal gland presented on histological preparation?
A. the intermediate zone
B. glomerular zone
C. beam area *
D. net Zone
E. medulla

836. The patient 40 years complains of paroxysmal high blood pressure, which is accompanied by palpitations, redness of skin, headache. Attacks ties with physical activity. In a study using ultrasound revealed a tumor of the adrenal gland in the formation of the right. What part of the parenchyma of the adrenal gland is the source of the tumor?
A. medulla *
B. glomerular zone cortex
C. net area of the cortex
D. beam Zone cortex
E. germinal zone

837. Calcitonin, which is synthesized in the thyroid gland and parathyrin, which is the product of parathyroid provide blood calcium levels by influencing one of the target cell. What is the name of a type of endocrine regulation?
A. antagonism *
B. synergies
C. atavism
D. communism
E. astigmatism

838. Person as a result of chronic gastritis disrupted the structure of the mucosa, reduced all indices of acid-forming function of the stomach. The most important negative consequence of this would be a violation of:
A. allocation of secretin
B. secretion of pancreatic juice
C. digestion of proteins *
D. evacuation chyme in the duodenum 12
E. secretory function of the small intestine

839. Person stands little thick saliva, reduced its enzyme activity, increase the amount of mucus. The most probable cause is dysfunction:
A. parotid gland *
B. submandibular glands and sublingual
C. submandibular glands
D. sublingual glands
E. own glands of the gastric mucosa

840. Deficiency of the enzyme is often the cause of incomplete digestion of fats in the gastro-intestinal tract and increases the amount of neutral fat in feces?
A. gastric lipase
B. intestinal lipase *
C. hepatic lipase
D. enterokinase
E. pancreatic lipase

841. In the patient's blood is a detected low level of albumin and fibrinogen.
Reduced activity of some liver hepatocytes organelles most reliably causes this phenomenon?
A. mitochondria
B. granular endoplasmic reticulum *
C. Golgi complex
D. lysosomes

842. On histological sections of fundus glands are seen as part of a relatively large cells with acidophilic cytoplasm, electron microscopy in these cells is determined by a complex system of intracellular tubules. That these cells produce?
A. the hydrochloric acid *
B. pepsinogen
C. mucus
D. serotonin
E. gastrin

843. A man of 35 years with a peptic ulcer is made resection of the antrum. The secretion of gastrointestinal hormones, that as a result of the operation will be broken most?
A. gastrin *
B. secretin
C. neurotensin
D. histamine
E. cholecystokinin

844. The patient has the common bile duct stone blocked the flow of bile to the intestine. Violation of the digestive process while there?
A. digestion of carbohydrates
B. the absorption of carbohydrates
C. the digestion of fats *
D. absorption of proteins
E. the digestion of proteins

845. Patient during the gastroscopy revealed insufficient mucus on mucosal surfaces. With dysfunction which cells of the stomach wall is that?
A. parietal cells of the gastric glands
B. cell prismatic glandular epithelium *
C. endocrinocytes
D. cervical cells
E. main exocrine

846. After suffering a chemical burn of the esophagus occurred locally its restriction resulting scar formation. Which cells of loose connective tissue involved in the formation of scar?
A. fibroblasts
B. young low-specialized fibroblasts
C. mature specialty fibroblasts *
D. myofibroblasts
E. fibroklasts

847. In histological specimen is a cross-section of the wall of the hollow body, the mucous membrane is covered with stratified squamous epithelium not keratinizing. What is the body?
A. uterus

B. 12 duodenal ulcer
C. colon
D. esophagus *
E. appendix

848. After gastrectomy patient developing pernicious anemia. The absence of cells of the gastric glands causes this pathology?
A. goblet
B. main
C. cervical mucosal
D. endocrinocytes
E. parietal *

849. In histological specimen of small intestine submucosa filled terminal secretory protein departments glands. Which department intestine is shown in preparation?
A. appendix
B. colon
C. jejunum
D. ileum
E. 12 duodenal ulcer *

850. In histological specimen the wall of the small intestine at the bottom of the crypts were found arranged in groups cells in the apical portion of which contain more acidophilic secretory granules, basophilic cytoplasm painted. What are cells?
A. cells without rims
B. cells Punnett *
C. endocrine cells
D. goblet cells
E. columnar with rim

851. On histological preparation organ parenchyma presented slices, which are shaped like hexagonal prisms and consists of anastomosing beams, between which are sinusoidal capillaries that converge radially to the central vein. Which anatomical organ is given morphological structure?
A. thymus
B. pancreas
C. liver *
D. spleen
E. lymph node

852. On the slides of the small intestine in the lamina propria found a cluster of cells with large spherical basophilic nuclei, which are surrounded by a narrow rim of cytoplasm. In most of the central part of the light clusters and contains fewer cells than peripheral. Which belong to the morphological structure of these clusters?
A. fat cells
B. the nerve bundle
C. lymphatic nodule *
D. blood vessels
E. lymphatic vessels

853. The patient, 55 years old, there is an endocrinologist about the endocrine function of the pancreas, which is evident decrease in the amount of the hormone glucagon in the blood. The function of any cancer cells disrupted in this case?

A. B cells of islets of Langerhans
B. A-islet cell *
C. D-islet cell
D. D1-islet cell
E. PP-cells of islets of Langerhans

854. The patient was 14 years old suffers from diabetes. What are endocrine cells of pancreatic islets do not function?
A. D - cells
B. A - cells
C. I - Cells *
D. D1- cells
E. PP - cells

855. In the first year of the child's life there is a violation of human milk curdling. In violation of its own activities which cells of the gastric glands is that?
A. main exocrine cells *
B. parietal exocrine
C. cervical mucocytes
D. additional mucocytes
E. exocrine

856. In the electron micrograph of the epithelium of the duodenum clearly defined cell with electron granules in the basal part of the cells. What is a cell?
A. parietal
B. parallel to the rim
C. undifferentiated
D. goblet
E. endocrine *

857. Histopreparation determined adenomere formed by cells with centrally placed round the nucleus and basophilic cytoplasm. Identify the type of end sections.
A. greasy
B. mucous
C. mixed
D. serous (protein) *
E. cero mucous

858. The administration of insulin to assess the completeness of vagotomy accompanied by a significant increase in the acidity of gastric juice. Which cells of the gastric glands provide this state?
A. cervical
B. endocrine
C. root
D. mucosal
E. parietal *

859. Stomatolog in the office intern clinic instructed to examine the patient areas of the oral mucosa, which coarsen. What are these sites?
A. at the tip of the tongue on the papilla, on the tonsils
B. in the hard palate, tongue, gums
C. in the cheeks, lower lip, back of the tongue
D. on the palate of the mouth and the diaphragm

E. on the hard palate, gums and free edges along the intermediate portion of the cheek *

860. Action of harmful factors was patchy damage to the epithelium of the stomach. At the expense of what cells will take its renewal
A. cervical mucocytes *
B. parietal exocrine
C. major exocrine
D. endocrinocytes
E. mucosal glands of the body

861. In histological sections of the fundus glands are seen as part of a relatively large cells with acidophilic cytoplasm, electron microscopy in these cells is determined by a complex system of intracellular tubules. What component of gastric juice is formed in consequence of the activity of these cells?
A. mucus
B. pepsinogen
C. hydrochloric acid *
D. serotonin
E. gastrin

862. The patient 50 years of age complain of increased appetite, thirst, weight loss, fatigue. Laboratory tests found to increase the amount of sugar in the blood. With no cell dysfunction associated with the development of this disease?
A. a klitok
B. in-klitok *
C. thyrocites
D. pankreatocytes
E. lipotropocytes

863. Histopreparation glandular organ determined only serous end sections. The interlobular connective tissue ducts have expelled a two-layer or multi-layer epithelium. Define the body.
A. parotid gland *
B. submandibular gland
C. pancreas
D. sublingual salivary gland
E. liver

864. At electron micrograph own gastric glands is determined by a large oval-shaped cell, the cytoplasm of which is a system of intracellular secretory tubules, a large number of mitochondria. Call this cell.
A. main
B. parietal *
C. undifferentiated
D. mucous
E. exocrine

865. An examination of the patient with diphtheria detect changes in the soft palate and uvula. What epithelium thus suffered damage?
A. stratified squamous *
B. pseudostratified prismatic
C. simple squamous
D. simple columnar

E. cubic

866. The major salivary glands are capable of massive salivation. Which channels are part of these glands?
A. intra-, interlobular ducts and duct cancer *
B. intralobular, striated and common duct
C. intercalated, striated and common duct
D. intra- and interlobular ducts
E. intralobular ducts and out glandular

867. In acute inflammation of the parotid gland secretion and broken processes of selection. Which cells are affected in this case?
A. serous, mucous
B. protein, serous, mucous
C. serous cells with basal striations, stellate cells
D. serous, myoepithelial cells *
E. bordered epithelial cells from the basal striation

868. In case of chronic inflammation of the salivary glands is observed damage to the epithelium of the excretory ducts. What epithelium is damaged while in striated ducts of the major salivary glands?
A. squamous epithelium with basal striation
B. prismatic epithelium with basal striations *
C. cubic epithelium with basal striation
D. the two-layer basal striation
E. multilayer cubic

869. In inflammatory diseases damaged gastric mucosa surface epithelium. What epithelium suffers from it?
A. simple columnar glandular *
B. simple squamous
C. a single-layer cubic micropottle
D. single-layer cubic
E. multilayer cubic

870. The patient has chronic enterocolitis (inflammatory bowel disease) misbehaving protein digestion and absorption in the small intestine resulting in insufficient quantities in intestinal juice dipeptidase. In some cells, disrupted the synthesis of these enzymes?
A. goblet
B. columnar with rim
C. columnar without rims
D. punnet cells *
E. endocrinocytes

871. In diseases of the small bowel mucosa suffers suction function. What epithelium is responsible for this function?
A. simple columnar ciliated
B. single layer cubic
C. simple columnar with rim *
D. stratified squamous
E. multilayer cubic

872. In a study of patients with diseases of the small intestine revealed disturbance of the wall and membrane digestion. With no cell dysfunction is the reason?
A. columnar with rim *
B. columnar without rims
C. goblet
D. cells Punnett
E. endocrinocytes

873. Endoscopy in patients with chronic enterocolitis (inflammation of the colon), there is a lack of specific structures of the relief of the small intestine. Which components determine the features of the relief of the mucous membrane of the body?
A. fields villi
B. fields, folds, pits
C. haustrum, villi, crypts
D. helical fold
E. circular folds, villi and crypts *

874. Which disease of the small intestine are associated with dysfunction of the exocrine cells with acidophilic granules (Punnett cells). Where are these cells?
A. in the upper part of the intestinal crypts
B. in the apical part of intestinal villi
C. on the side surfaces of the intestinal villi
D. in the transition of the villi in the crypts
E. at the bottom of intestinal crypts *

875. At some diseases of the colon vary quantitative relationships between the epithelial cells of the mucosa. What types of cells predominate in the epithelium of the crypts of the colon is normal?
A. endocrinocytes
B. the columnar villous epithelial cells
C. goblet cells *
D. the cells with acidophilic granules
E. undifferentiated cells

876. At sigmoidoscopy detected a tumor that originates from the mucous membrane of the end of the rectum. Because of the tumor epithelium formed?
A. stratified squamous not keratinizing *
B. simple columnar glandular
C. simple columnar limbic
D. single-layer cubic
E. transitional epithelium

877. At examination of the patient revealed an anomaly of the liver. What is the source of embryonic suffered damage?
A. foregut endoderm
B. the endoderm of the rear wall of the trunk intestine
C. endoderm middle part of the primary gut *
D. mesonephral duct
E. the endoderm of the hindgut

878. Proliferation of connective tissue in the parenchyma of the liver (fibrosis) as a result of chronic diseases is a breach of the blood circulation in the classic slices. What is the direction of the blood flow in these lobules?

A. from the periphery to the center *
B. from the center to the periphery
C. around slices
D. from the top to the bottom
E. from the base to the top

879. People who are prone to excessive consumption of sweets, are constantly in a state of tension certain cells of the pancreas. Which ones?
A. A cells
B. B-cells *
C. D-cells
D. PP-cells
E. acinar-islet

880. Histopreparation villi of the small intestine are determined coated fabric, which consists only of cells forming layer disposed on a basal membrane. The fabric does not contain blood vessels. What tissue covers the surface of the villi?
A. loose connective tissue
B. epithelial tissue *
C. the dense fibrous connective tissue
D. smooth muscle tissue
E. reticulum

881. In histological specimen presented organ of the digestive system, the wall of which has a shell 4: mucosa, submucosa, muscular and serous. The mucous membrane has folds and pits. Determine which body has the relief?
A. esophagus
B. stomach *
C. duodenum
D. small intestine
E. vermiform appendix

882. At histological preparations are shear walls organ of the digestive system, the relief of the mucous membrane that has holes. The surface is covered with pits epithelium in which all cells lie on a basal membrane have a prismatic shape, the apical part of the cells is filled with droplets of mucoid secretions. Determine which body has such a structure?
A. esophagus
B. stomach *
C. duodenum
D. small Intestine
E. vermiform appendix

883. At histological preparations are body in the lamina propria of which there are simple tubular glands, which include the main, parietal, mucous cells and endocrinocytes. Specify the type of glands.
A. pyloric stomach cancer
B. own stomach cancer *
C. cardiac stomach cancer
D. own esophageal cancer
E. cardiac cancer of the esophagus

884. At histological preparations are iron. The lobules are defined acini, secretory cells which have two zones: basal - homogeneous basophilic and apical - zymogens oxyphilic. Which authority has the morphological features?
A. liver
B. pancreas *
C. parotid gland
D. submandibular gland
E. sublingual salivary gland

885. In histological specimen determined parenchymal organ, the structural and functional units of which are slices. Recent clearly demarcated from one another, in the center of Vienna is the central lobes radially directed beam intralobular sinusoids. Slices demarcated interlobular arteries, veins and bile ducts (triads). Which authority has the morphological features?
A. kidney
B. thyroid
C. pancreas
D. parotid gland
E. liver *

886. Patients with chronic atrophic gastritis found signs of hypochromic anemia. Any violation of the functions of cells of the gastric glands can be attributed to the development of anemia?
A. parietal cells *
B. the main cells
C. additional cells
D. cervical cells
E. endocrine cells

887. Patient hospitalized in therapeutic clinic. Laboratory set lowering gastric acidity. Which cells of the gastric glands caused this condition?
A. main
B. parietal *
C. mucous
D. endocrine
E. cervical

888. At patient chronic gastritis made a pH meter by which established a decrease in gastric acidity. The function of any cell is lowered?
A. parietal exocrine cells *
B. major exocrine
C. endocrinocytes
D. cervical cells
E. additional cells

889. At morphological analysis of biopsies of esophageal mucosa taken from the patient, found the process keratinizing epithelium. Which of the following types of epithelia marked covers the mucous membrane of the esophagus?
A. stratified squamous not keratinizing *
B. simple squamous
C. a single-layer multi-row ciliated
D. simple columnar
E. stratified squamous keratinizing

890. Clinic patient hospitalized with poisoning. It is found that in liver detoxification mechanisms violated. Which of hepatocyte organelles primarily caused this condition?
A. smooth endoplasmic network *
B. mitochondria
C. the granular endoplasmic reticulum
D. golgi complex
E. ribosomes

891. Cancer patients after radiation therapy using morphological study found a significant violation of the process of regeneration of the epithelial layer of the mucous membrane of the small intestine. Which cells of the epithelial lining is damaged?
A. the columnar epithelial cells in the crypts without over *
B. columnar epithelial limbic
C. goblet exocrine
D. endocrine cells
E. exocrine cells with acidophilic grit (Penneta)

892. Patient 48 years after radiation therapy for cancer of the stomach developed pernicious anemia as a result of damage to the cells that produce antianemic factor. Which cells of the gastric glands amazed at this?
A. parietal cells *
B. major exocrine
C. cervical mucocytes
D. endocrinocytes
E. additional mucocytes

893. In the human diet large amounts of carbohydrates. What structures will be provided while in the cytoplasm of hepatocytes?
A. glycogen granules *
B. droplets of fat
C. one large oil drop
D. increasing the number of free ribosomes
E. integration of lipofuscin

894. Patient reduced the rate of renovation of the epithelium of the small intestine. With no damage epithelial cells it can be connected?
A. columnar epithelial cells from the rim
B. cell Punnett
C. columnar epithelial cells without over *
D. goblet cells
E. endocrinocytes

895. A girl of 15 years received a chemical burn of the upper surface of the tongue. What epithelium is damaged at the same time?
A. the multilayered keratinizing *
B. simple columnar
C. a single-layer multi-row ciliated
D. transition
E. simple squamous

896. Patient 39 years after radiation therapy for tumors of the liver, small intestine ulcers formed as a result of inhibition of the mitotic activity of cells that mediate the resumption of the surface epithelium of the small intestine. Call them.
A. columnar cells
B. columnar epithelial crypt without over *
C. goblet exocrine
D. endocrine cells
E. exocrine cells with acidophilic grit

897. Patient S. 45 years old hospitalized with complaints of pain in the stomach. Gastroscopy revealed the presence of small-sized ulcers at the site of the fundus. Impaired function of any cell of the gastric mucosa was one of the causes of damage?
A. endocrine cells that produce serotonin
B. parietal cells of the gastric glands that produce chlorides and hydrogen ions
C. main exocrine cells that produce pepsinogen
D. endocrine cells producing somatostatin
E. cell surface epithelium that produce mucous secretion *

898. As a result, release of oncogenes in the embryo arose from the violation of differentiation of embryonic primordia. Consequently developed a malignant tumor of the small intestine tunica muscularis. The development of embryonic germ has been violated?
A. myotomy
B. splanchnotome
C. neural tube
D. the cutaneous ectoderm
E. mesenchyme *

899. Patients with chronic gastritis when viewed from the phenomenon of "precipitated language" due process keratinizing. What papillae lingual epithelium coarsen?
A. connective papillae
B. mushroom-shaped papillae
C. trough nipples
D. the leaf buds
E. philiform papillae *

900. Parotid gland has end sections formed serocytes. Which of these cell organelles provide synthesis and secretion of salivary components?
A. smooth endoplasmic network, Golgi complex
B. the plate complex
C. the granular endoplasmic reticulum, Golgi complex *
D. mitochondria, Golgi complex
E. lysosomes

901. In histological specimen presented mucosa organ. On the surface of the villi in the epithelial cells of the reservoir are determined with prismatic rim and goblet cells. The composition of the body consists of these cells?
A. the small intestine *
B. the stomach
C. colon
D. ureteral
E. bronchitis

902. In biopsies of the stomach of the patient Histological examination revealed a significant reduction or complete absence of the parietal cells in the glands. The mucosa of the stomach area studied?
A. own stomach cancer
B. fundus
C. cardiac department
D. the body of the stomach
E. pylorus *

903. Investigate the histological preparation of the salivary glands, which in addition to protein and mixed end sections are defined and mucous membranes. The drug is a cancer investigated?
A. buccal
B. parotid
C. submandibular
D. labial
E. sublingual *

904. In peripheral zone of the pulp for certain reasons temporarily inhibited cell activity. What tooth tissue is threatened breach of physiological regeneration?
A. enamel
B. dentin *
C. the pulp
D. cement cell
E. cement incell

905. At exam, responding to a question about the development of hard and soft tissues of the tooth, a student made a mistake when he said that the enamel formed from mesenchymal cells. What was supposed to be the right answer?
A. because the epithelial cells of the inner layer of the enamel organ *
B. from the stellate reticulum cells of the enamel organ
C. it follows from the epithelial cells of cervical enamel organ
D. from the cells of the vaginal epithelial Hertwig
E. from the outer epithelial cells of the enamel organ

906. The student remembered that the epithelium of the oral mucosa stratified squamous not keratinizing. On histological preparation cheeks he saw on both sides of its epithelium is keratinized. What had to remember a student?
A. stratum can mandibular buccal mucosa area
B. maxillary area stratum can mucosa
C. stratum may cheek area near the exit of the parotid gland ductless
D. stratum can transition zone buccal mucosa on the gums
E. stratum can intermediate zone buccal mucosa *

907. At histological preparations are cut jaw human embryo 2nd of the month that contains the damaged tooth epithelial organ. What histological part of the tooth will not develop?
A. enamel *
B. pulp
C. cement
D. periodontium
E. dentin

908. At examination patient was found abnormal development of enamel. With damage to any of structural components of the tooth germ is that?
A. the outer enamel epithelium of the enamel organ
B. internal enamel epithelium of the enamel organ *
C. the intermediate layer of the enamel organ
D. pulp enamel organ
E. neck dental enamel organ

909. In the process of embryonic development occurred damage the surface of mesenchymal cells of the dental papilla. For violation of the formation of a tooth structure it could lead?
A. dentin tooth *
B. tooth enamel
C. cement tooth
D. periodontal
E. cuticle enamel

910. In during tooth morphogenesis was damage to the internal cells of the dental follicle. Formation of any tooth structure will be broken?
A. dental pulp
B. tooth enamel
C. dentin tooth
D. cement tooth *
E. periodontal

911. At examination of the patient was found insufficient development of the dental pulp. What is the source of embryonic suffered damage?
A. mesenchyme *
B. ectoderm
C. endoderm
D. buccal
E. dorsal mesoderm

912. At histological preparation sagittal section Bookmark mandible 5-month-old human fetus observed epithelial enamel organ, surrounded by a compact arrangement of mesenchymal cells. As it is called mesenchymal education?
A. the dental papilla
B. dental pouch *
C. the outer enamel cells
D. internal enamel cells
E. pulp enamel organ

913. At child of 11 years on x-ray are missing lateral incisors (edentia). It's connected with:
A. violations of dental papilla
B. violations of dental sac
C. violations of Education enamel organ *
D. violations of the formation of dentin
E. violation education cement

914. After dentin formation begins the process of inversion in cells - moving the nucleus and organelles. As for what cells this process?
A. odontoblasts
B. ganoblast *

C. preodontoblasts
D. cementoblasts
E. cementocytes

915. At microscopic examination of biopsy material was found periodontal underdevelopment. What is the source of the tooth is broken?
A. the dental papilla
B. dental pouch *
C. braces
D. preenameloblasty
E. ganoblast

916. On histological preparation organ mouth seen 4 zones: fat, glandular, and the edge zone of the weld. What kind of authority on the drug?
A. the soft palate
B. gums
C. the hard palate *
D. lib
E. cheek

917. On histological preparation visible organ of the mouth, which consists of three parts - the skin, intermediate, mucosa, and forms the basis of striated muscle tissue. What is this body?
A. cheek
B. gums
C. the hard palate
D. the soft palate
E. lib *

918. On histological preparation organ oral seen that the front surface is lined by stratified squamous epithelium not keratinizing and the rear surface - multilane ciliated epithelium. What is this body?
A. cheek
B. gums
C. the hard palate
D. the soft palate *
E. lib

919. At sick child has a white coating on the tongue. Due to what is happening papillae this phenomenon?
A. threaded nipples *
B. trough papillae
C. taper papillae
D. mushroom papillae
E. leaf-buds

920. At baby during the act of swallowing, choking noted, the milk through the nose, shortness of breath. On examination, the child's surgeon discovered a birth defect, the so-called "cleft palate". Indicate which of the anomalies give rise to this disease.
A. mandibular nonunion processes
921. B. violations of the fusion process with the middle nasal maxillary
922. C. nonunion palatal processes *
923. D. non-union side lingual cusps

A. violation of frontal process

924. Experiment embryo in the tooth germ was destroyed by the outer layer of the dental follicle. Specify what the structure of the tooth does not have its further development?
A. the pulp
B. enamel
C. dentin
D. cement
E. periodontium *

925. On patient 42 years old, who suffers from periodontal disease, in the coronal portion of the pulp found calcified rounded education with a diameter of 2-3 mm What are these structures.
A. dentin *
B. interglobular space
C. sclerotic (transparent) dentin
D. dead dentin
E. intertubular dentin

926. On patients with chronic gastritis at a blood test found decrease in the number of red blood cells. What is the function of the gastric mucosa is broken?
A. secretion antianemic factor *
B. secretion of hydrochloric acid
C. the secretion of pepsinogen
D. the secretion of gastrin
E. Secretion of histamine

927. Patient 35 years complains of weakness, poor tolerance of certain food products (milk), dyspepsia. In the analysis of gastric juice defined low level of free hydrochloric acid. The secretory activity of some exocrine glands of the stomach is reduced?
A. parietal *
B. main
C. cervical mucosal
D. cells Punnett
E. columnar exocrine

928. In part of the end sections of the salivary glands, other than secretory exocrine cells, the cells are determined pottle forms that are placed on the outside layer of secretory and promote the flow of secretions system excretory ducts. What specific organelles in the cytoplasm can be determined basket cells?
A. cilia
B. akros
C. neyrofibrily
D. flagella
E. myofilaments *

929. Study of the projections of the epidermis fingerprint fingers (fingerprinting) is used in forensics to identify an individual as well as for the diagnosis of genetic abnormalities, such as Down syndrome. What layer of the skin is determined by individual prints?
A. net
B. papillary *
C. basal
D. brilliant

E. horn

930. Under the influence of ultraviolet rays on human skin is dark, it is a defensive reaction. What protective substance is synthesized in the cells exposed to said factor?
A. arginine
B. DNA
C. vitamin D
D. tryptophan
E. melanin *

931. The patient has found an easy flushing of the skin and sloughing of the skin hyperemic. The boundaries of damaged skin are clearly defined, have an irregular shape, palpation painless. Which epithelia struck mycosis?
A. Transition
B. multi-layer cubic
C. stratified squamous keratinizing *
D. stratified squamous not keratinizing
E. multi-layered cylindrical ciliated

932. The end section of apocrine sweat glands contain myoepithelial cells. What is the function of these cells?
A. contraction *
B. secretory
C. protective
D. regenerator
E. maintenance

933. With age, the human skin undergoes changes that may occur a decrease in its elasticity. What are the elements of connective tissue provides the most flexibility it?
A. basic material *
B. collagen and elastic fibers
C. the cells of the epidermis
D. connective tissue cells
E. reticular fibers

934. The biopsy material were found in the epidermis of skin cells with processes that have granules dark brown in the cytoplasm. What are these cells?
A. lymphocytes
B. intraepidermal macrophages
C. keratinocytes
D. merkel cells
E. melanocytes *

935. The child scratches the skin around any signs of inflammation: pain, redness, swelling, as signs of immediate hypersensitivity. What are the blood cells are responsible for these changes?
A. eosinophils
B. basophils *
C. neutrophils
D. lymphocytes
E. monocytes

936. Forensic fingerprinting method is widely used, which is based on the fact that the papillary dermis determines strictly individual pattern on the surface of the skin. What tissue forms the dermis?
A. loose fibrous connective tissue unformed *
B. the dense connective tissue decorated
C. dense irregular connective tissue
D. reticulum
E. adipose tissue

937. In a limited area of the epidermis resulting in no injuries layers up to sprout. Name the cells that serve as the main source of regeneration.
A. layer of basal cells *
B. spiny layer cells
C. a layer of granular cells
D. layer spiny and granular cells undisturbed plot
E. cells brilliant layer undisturbed plot

938. With age, in human skin wrinkles and folds. Changes to any structures of the skin mainly causes this condition?
A. the collagen fibers
B. the elastic fibers *
C. the epidermis
D. in an amorphous substance
E. in the subcutaneous fat

939. Patient A., 12 years old, white spots on the skin that have pigment. The spots appeared after 10 years, are constantly increasing in size. The absence of the skin cells led to the appearance of these spots?
A. melanocytes *
B. adipocytes
C. fibrocytes
D. plasmocytomas
E. mast cells

940. In forensic practice occasionally there is a need to authenticate the individual. For this purpose, the method of fingerprinting. Features of the structure of the layer is determined by the individual pattern of the skin?
A. papillary dermis *
B. reticular dermis
C. the epidermis
D. epidermis and dermis
E. the epidermis, dermis and hypodermis

941. Injure the skin to damage the mesh layer. Due to the activities of diferona cell regeneration of this layer will be held?
A. erythroblastic
B. makrofagic
C. lymphoblastic
D. neyroblastic
E. fibroblast *

942. The patient 30 years found a malignant tumor of the skin. Which cells of the epidermis are involved in the immune response?

A. cells thorny layer
B. keratinocytes
C. keratinocytes and Merkel cells
D. merkel cells
E. T-lymphocytes *

943. In histological specimen represented a body wall which has a stratified structure, covered with stratified squamous epithelium of the stratum. Under the epithelial basement membrane is loose connective tissue, which juts out into the epithelium of the papillae. Below is a dense connective tissue that forms a mesh layer. Which agency has data morphological features?
A. skin *
B. language
C. esophagus
D. tonsils
E. cervix

944. In histological specimen of the skin epidermis are determined as part of such layers: basal, prickly, granular, shiny and thick horn. Which area of skin a person can belong to the epithelium?
A. leather palm *
B. the facial skin
C. scalp
D. leather shoulder
E. the skin thigh

945. In the electron micrograph of the epidermis skin cells among cubical stand Process cell, the cytoplasm of which is well developed Golgi apparatus, ribosomes, and a lot of melanosomes. Name this cell.
A. melanocytes *
B. keratinocytes
C. langerhans cells
D. merkel cells
E. tissue basophils

946. The patient is listened dry pleurisy pleural rub. With the defeat of the type of epithelium observed this symptom?
A. stratified epithelium
B. simple squamous epithelium *
C. transitional epithelium
D. single-layer cubic epithelium
E. simple columnar epithelium

947. The patient, a sharp decrease in the activity of lung surfactant. What changes can be expected in this patient?
A. changes in the elastic properties of the lung
B. the tendency of alveoli to stick togetherand the impossibility of their fast unfolding*
C. reduction of tracheobronchial secretions
D. violations of the circulation in the lungs
E. proliferation of connective tissue of the lungs

948. Electron micrograph of biopsy material easy premature baby. Detected alveolar walls from sticking to the absence of surfactant. Violation of the cell walls of the alveoli any predetermine this picture?

A. secretory cells
B. alveolocytes type I
C. fibroblasts
D. alveolar macrophages
E. alveolocytes type II *

949. Premature infants often observed respiratory distress syndrome. What is the most likely cause of this?
A. underdevelopment alveoli of the lungs due to lack of surfactant *
B. intrauterine asphyxia
C. imperfect nervous regulation of the respiratory act
D. swallowing amniotic fluid
E. fetal hypercapnia

950. The histological preparation is represented by the body wall of which consists of the mucosa, submucosa, fibro-cartilage and adventitia shells. Pseudostratified ciliated epithelium, lamina muscularis mucosa is absent in the submucosa - protein-mucous glands, hyaline cartilage forms an open ring. Which agency has data morphological features?
A. trachea *
B. terminal bronchioles
C. average bronchus
D. small bronchi
E. larynx

951. The formulation contains hollow organ. The mucous membrane is covered with two-row ciliated epithelium, which goes into single-row. Muscle plate mucosa is well developed in relation to the thickness of the entire wall. Cartilage and glands absent. What body is represented in the preparation?
A. middle bronchus
B. bladder
C. larynx
D. the trachea
E. bronchial tubes *

952. In the electron micrograph shows the structures in the form of open bubbles, the inner surface of which is lined with a single layer of epithelium, which is formed in respiratory and secretory cells. What is the structure?
A. the alveoli *
B. bronchioles
C. acini
D. alveolar ducts
E. terminal bronchioles

953. The airway epithelium has cells with a domed apical part, which is placed on the surface of the microvilli. In the cell, a well-developed synthetic apparatus, and in the apical part - secretory granules. What are cells?
A. cambium
B. goblet
C. endocrine
D. cells without rims
E. cage Clara *

954. Premature babies develop respiratory distress syndrome. Lack of blood barrier component underlies this pathology?
A. alveolocytes
B. capillary endothelial
C. the basal membrane of the endothelium
D. basement membrane alveolocytes
E. surfactant *

955. The histological preparation composed of multi-row tracheal ciliated epithelium cells were seen low oval or triangular shape. His tip they do not reach the apical surface of epithelial cells seen in some mitotic figures. What is the function of these cells perform?
A. is a source of regeneration *
B. get into the muco-ciliary complex
C. secrete mucus
D. secrete surfactant
E. producing biologically active substances

956. As a result of injury to the nose of a man 30 years damaged the mucous membrane that lines the upper portion of the turbinate. What consequences this led?
A. violations of the perception of odorants *
B. violations of humidification
C. violations of the secretory activity of goblet cells
D. violations of warming air
E. violation of the warming and humidification

957. In the electron micrograph revealed alveolar cells, which are part of the air-blood barrier. What are these cells?
A. the secretory epithelial cells of the alveoli
B. respiratory epithelial cells of the alveoli *
C. alveolar macrophages
D. cells Clara
E. micropottle epithelial

958. The autopsy of the dead men was 65 years, who suffered from lung disease, the disease process has been localized mainly in the bronchi, where histologically were clearly visible cancer, cartilage islands and multi-ciliated epithelium. What bronchi changes?
A. average bronchi *
B. main bronchus
C. large bronchi
D. small bronchi
E. terminal bronchioles

959. A child of two years reduced excretion of mucus from the bronchial tree. With impairment of any structure surface epithelium of bronchi it can be connected?
A. lysosomes
B. mitochondria
C. endoplasmic reticulum
D. microvilli
E. cilia *

960. In the electron micrograph of biopsy material presented lungs of a premature baby. Found sleeping walls of the alveoli due to the absence of surfactant. Specify any violation of the cell walls of the alveoli makes this picture?
A. alveolocytes Type II *
B. type I alveolocytes
C. alveolar macrophages
D. secretory cells
E. fibroblasts

961. It is known that an important component of the air-blood barrier is alveolar surfactant complex that prevents the adhesion of the alveoli during expiration. What alveolar cells synthesized phospholipids, which go to form the membranes?
A. epitheliocytes type II *
B. respiratory cells
C. limbic epithelial
D. alveolar macrophages
E. capillary endothelial

962. The histological preparation contains a body whose wall has a mucosa, submucosa, fibrous cartilage and adventitia. Epithelium - pseudostratified ciliated. In the submucosa are mucous-gland protein. Hyaline cartilage forms a large plate. Which agency has data morphological features?
A. major bronchi *
B. esophagus
C. the trachea
D. larynx
E. small bronchi

963. In the electron micrograph of biopsy material are structures, which include the surfactant, alveolocytes type I, basal membrane and fenestrated endothelium of the capillaries. Which histo-hematic barrier in humans belong to these structures?
A. air-blood *
B. blood-brain
C. gematothymus
D. hematholic
E. testes

964. In histological specimen of the airways in the composition of the surface epithelium are ciliated and goblet cells, which form muco-ciliary complex. Specify which function belongs to this complex?
A. dust extraction *
B. hormone secretion
C. warming the air
D. humidification
E. respiratory

965. The patient was admitted to the department with asthma attack, which is caused by a spasm of airway smooth muscle. What parts of the airways, which is mainly due deny attack.
A. the bronchi small caliber *
B. bronchi medium caliber
C. bronchi caliber
D. the terminal bronchioles
E. respiratory departments

966. The child breathed a button that uses a bronchoscope was removed from the right main bronchus. What bronchial epithelium most likely damaged by a foreign object?
A. simple pseudostratified ciliated *
B. multilayer not keratinizing
C. A single layer low prismatic
D. transition
E. simple squamous

967. A man of 66 years diagnosed with a malignant epithelial tumor that develops from the bronchi medium caliber. What is the source of the epithelium of the tumor?
A. transition
B. multilayer not keratinizing
C. the multilayered keratinizing
D. simple pseudostratified ciliated *
E. simple columnar

968. A man of 56 years diagnosed with a benign epithelial tumor of the trachea. What is the source of the epithelium of the tumor?
A. simple pseudostratified ciliated *
B. multilayer not keratinizing
C. the multilayered keratinizing
D. single-layer multi-row transition
E. simple columnar

969. During the damaged wall of the tracheal intubation. The integrity of the type of epithelium was broken at the same time?
A. simple pseudostratified low prismatic
B. simple pseudostratified ciliated *
C. multilayer not keratinizing
D. multilayer stratum
E. mono-layer

970. A man 48 years old diagnosed with a benign epithelial tumor visceral pleura top of the right lung. What is the source of the epithelium of the tumor?
A. simple pseudostratified ciliated
B. multilayer not keratinizing
C. simple squamous *
D. transition
E. multi-layered stratum

971. In the alveolar space acinar infiltrated bacteria, which held their interaction with the surfactant. This resulted in an active state of a cell, which are located in the walls of the alveoli. What are cells?
A. alveolar macrophages *
B. type I alveolocytes
C. endotheliocytes
D. cells Clara
E. alveolocytes type II

972. In lung biopsy under microscopic examination revealed the terminal bronchioles. What epithelium lining bronchioles data?

A. a single layer ciliated cubic *
B. stratified squamous not keratinizing
C. a single-layer multi-row ciliated
D. single-layer cubic
E. a single-layer two-row ciliated

973. Otolaryngologist doctor a patient appealed with complaints of dryness in the nasal cavity, which causes discomfort. When studying the nasal mucous membrane is set dysfunction of mucous glands, which are located therein. In which layer the mucosa of the nasal cavity located these glands?
A. in the lamina propria *
B. the epithelial plate
C. in the muscle plate
D. in the submucosa
E. the fibro-cartilaginous plate

974. It is known that working in a mine is associated with the inhalation of large amounts of coal dust. In which lung cells can be found coal dust?
A. capillaries pericytes
B. respiratory epithelial cells
C. secretory epithelial cells
D. capillary endothelial
E. alveolar macrophages *

975. On a microscopic specimen of human lung patient pneumonia observe cell injury which are responsible for respiratory function. What are cells?
A. alveolocytes type II
B. alveolocytes type I *
C. macrophages
D. cells Clara
E. lymphocytes

976. In the preparation of one of the divisions of the respiratory system detected a tubular body, which is determined by a low epithelium, well developed muscular layer, there are no glands and cartilage. Name this body.
A. major bronchi
B. trachea
C. larynx
D. small bronchi *
E. average bronchi

977. In lung alveoli have special cells, through which gas exchange, they are part of the air-blood barrier. What are these cells?
A. alveolocytes first type *
B. Clara cells
C. alveolar macrophages
D. alveolocytes second type
E. micropottle epithelial

978. In histological specimen light discovered the structure, the wall of which consists of a single layer of cubic ciliated epithelium, muscle plate consists of smooth muscle, no mucosal folds. What kind of education?
A. terminal bronchus *

B. small bronchus
C. the mean bronchus
D. large bronchi
E. the main bronchus

979. As a result of premature birth (31 weeks of pregnancy) the child was born with signs of respiratory failure. What are the structural features of the acini 31-week fetus associated state of the newborn?
A. lack of surfactant A *
B. excess surfactant A
C. lack of elasticity of the lung stroma
D. excess surfactant F
E. the absence of surfactant

980. Mucous shell bronchial tree forms longitudinal folds due to the presence of muscle plate. The caliber of the bronchi of the folds are not defined?
A. main bronchus
B. major bronchi
C. average bronchi
D. small bronchi
E. terminal bronchioles *

981. The body contains histopreparation nervous system, which contains gray and white matter. The gray matter placed on the periphery. Neurons in it consists of three layers: molecular, ganglionic and granular. Which body belongs to these morphological features?
A cerebral cortex
B. spinal cord
C. medulla oblongata
D. bridge
E. cerebellum *

982. The histological preparation eyeball wall defined structure that consists of a chain of three neurons. The bodies of these neurons form the outer, inner nuclear layer and ganglion. What kind of education the eye has the morphological structure?
A. retin*
B. iris
C. sclera
D. choroid
E. the ciliary body

983. A month after the trauma center of the eye piece of glass formed on the cornea cataract, which sharply reduced vision. Due to a layer of the cornea took education cataracts?
A. own substance of the cornea *
B. rear corneal epithelium
C. anterior limiting membrane
D. front corneal epithelium
E. posterior limiting membrane

984. Patients underwent corneal transplant. What are the features of the structure of the cornea allow engraftment of hope for her, not rejection?
A. over-innervation
B. have multilayered epithelium front

C. lack of blood and lymph vessels typical *
D. the presence of the connective tissue
E. availability of a single layer of squamous epithelium

985. In patients with acute rhinitis revealed hyperemia and increased mucus production in the nasal cavity. The activity of any cells in the epithelium of the mucous membrane is increased?
A. endocrine
B. goblet *
C. ciliated
D. the basal
E. micropottle

986. glaucoma patients there is an increase in intraocular pressure in normal secretion of aqueous humor by the ciliary body. With damage to any structures of the wall of the eyeball due violation of the outflow of fluid from the anterior chamber?
A. choroid
B. rear corneal epithelium
C. venous sinuses *
D. ciliary body
E. ciliary muscle

987. In histological specimen is determined by the receptor zone sensoepitelial senses. Cells of the zone lying on the basal membrane and include the following types: external and internal sensor, the outer and inner phalangeal cells, A-pillars, and the outer border external support. Which sense organ belongs to this receptor zone?
A. organu smell
B. authority of
C. authority equilibrium
D. authority of taste
E. hearing *

988. In the experiment, the threshold force of stimulation of cells of different tissues. Which of the following cell, he would be the lowest?
A. smooth muscle myocytes
B. glandular cells
C. cardiomyocytes
D. the spinal motoneurons *
E. in skeletal muscle myocytes

989. In the electron micrograph shows a cell of neural origin. The terminal portion of the dendrite cells is cylindrical in shape and consists of 1000 closed membrane discs. What is this cage?
A. cone visual cells
B. neuron anterior horn of the spinal cord
C. neuron spinal unit
D. neuron of the cerebral cortex
E. rod visual cell *

990. In the electron micrograph shows cells of neural origin, which is composed of the mucosal epithelium. The distal portion of the peripheral process cells has clavate thickening, which runs 10-12 cilia. What is this cage?
A. olfactory cells *
B. bipolar neurons of the spinal unit

C. sensory epithelial organ of taste
D. rod visual cell
E. cone visual cells

991. The examination optometrist found that the patient does not distinguish between blue and green, in the normal perception of other colors. With impairment of any structure of the retina is the reason?
A. amacrine neurons
B. rod-shaped neurons
C. bipolar neurons
D. cone neurons *
E. horizontal neurons

992. The patient 14 years, there has been a violation of twilight vision. What vitamin deficiency in the body?
A. C
B. B1
C. B6
D. A *
E. B12

993. The patient has damaged the ciliary body. The function of the device with the affected eye?
A. protective
B. light guide
C. photosensitive
D. accommodative *
E. trophic

994. As a result of injuries in men 47 years old damaged anterior roots of the spinal cord. Scion some neurons are damaged?
A. the axons of sensory cells psevdounipolar
B. the axons of motor neurons in the somatic and autonomic nuclei *
C. dendrites psevdounipolar sensitive cells
D. dendrites and axons of motor cells of cell nuclei of the lateral columns
E. dendrites and axons of sensitive cells psevdounipolar

995. As a result of head injuries in men 32 years damaged ampullar scallops. The perception of some irritations violated?
A. linear acceleration
B. vibrations
C. gravity
D. angular acceleration *
E. vibrations and gravity

996. As a result of injury to the nose of a man 32 years damaged mucosa of the upper turbinate. What consequences this led?
A. insufficient warming and humidification
B. insufficient warming air
C. insufficient humidification
D. violations of smell *
E. violation of air purification

997. The histological preparation wall eyeball determined structure in which there are no blood vessels. What kind of education is characterized according to morphological sign?
A. retin
B. ciliary body
C. choroid
D. iris
E. cornea *

998. In the electron micrograph observed sensory organ cells, peripheral part of which consists of two segments. In the outer segment membrane revealed half-disks, and in the inner - ellipsoid. What body is this structure?
A. the organs of taste
B. the body of *
C. in the olfactory organ
D. in the organ of balance
E. the hearing

999. In the sense organ electron micrograph of hair cells can be seen on the apical part of which features short microvilli - stereocilia and polar posted kinocilium. For a sense organ characteristic of these cells?
A. organs of smell
B. organs of
C. institutions equilibrium *
D. authority of hearing
E. authority taste

1000. Alcohol intoxication, usually accompanied by impaired motor coordination and balance, as a result of damage to structural elements of the cerebellum. The function of any cell of the cerebellum is broken in the first place?
A. stellate cells
B. basket cells
C. cells Betz
D. pear-shaped cells (Purkinje cells) *
E. granulosa cells

1001. Histopreparation, impregance silver salts determined crust of the cerebellum, which contains pear, pottle, stellate neurons, cells of grain. What neurocytes, which are part of the molecular layer.
A. pear-shaped
B. stellate, pyramidal
C. cells-grain, large stellate
D. large stellate and fusiform
E. pottle, small and large stellate *

1002. In histological specimen organ of the nervous system, impregnated with silver salts, defined neurons pear-shaped, star-shaped, spindle-shaped cells of grain. Which of these cells are the efferent neurons of the cerebellum?
A. pear-shaped neurons *
B. cells-grain
C. pyramidal neurons
D. stellate neurons
E. horizontal spindle neurons

1003. The histological preparation defined body which consists of gray and white matter. The gray matter is located on the periphery and has 6 layers: molecular, granular appearance, pyramidal, internal granular, ganglion cell layer and polymorphic. Define the structure, which holds the data morphological features.
A. cerebellum
B. medulla Oblongata
C. cortex *
D. spinal unit
E. spinal cord

1004. The histological preparation defined body which consists of gray and white matter. The gray matter is located in the center and consists of a beam, radicular and associative neurons. What authority, characterized by morphological features of the data.
A. large hemisphere
B. medulla oblongata
C. cerebellum
D. spinal ganglion
E. spinal cord *

1005. In histological specimen organ parenchyma presented neural tissue, which defines psevdounipolarneurons. The bodies of neurons and glial connective tissue covered with shells, are placed in groups. Name the body to which the data belongs morphological features.
A. epiphysis
B. abdominal plexus
C. spinal ganglion *
D. spinal cord
E. cerebellum

1006. If vitamin A deficiency in humans is disrupted night vision. Select the cells that belong to this receptor function.
A. rod neurosensory cells *
B. cone neurosensory cells
C. bipolar neurons
D. horizontal neurons
E. ganglion nerve cells

1007. The patient in the survey found a violation of the perception of the green. The absence of the cells causes the retina of the violation?
A. cone neurosensory cells *
B. neurosensory cells
C. pigment epithelial
D. bipolar neurons
E. ganglion neurons

1008. With age, older people celebrated cataract /cataract/. Thus it becomes opaque, resulting in partial or complete blindness. Optical properties and chemistry of protein in the cytoplasm of lens fibers are broken?
A. crystallin *
B. vitrein
C. dynein
D. rhodopsin
E. iodopsin

1009. Department of the central nervous system has a stratified arrangement of neurocytes, among which are the cells of these forms: stellate, fusiform, horizontal, pyramid. Which parts of the nervous system corresponds to such a structure?
A. cerebellum
B. cerebral cortex of the brain
C. hypothalamus
D. medulla oblongata
E. spinal cord

1010. The patient 55 years as a result of the constant use of alcohol and intoxication, which has developed, there has been poor coordination of movements and balance. In violation of the nervous structures of the central nervous system is that?
A. pottle form cerebellar neurons
B. pear-shaped neurons in the cerebellum *
C. stellate neurons of the cerebellum
D. spinal motoneurons
E. olive medulla

1011. The patient entered the clinic for 15 years with a diagnosis of polio. The disease is accompanied by a dysfunction of the motor system. Any destruction of nerve structures are explained by these violations?
A. cerebellar neurons
B. sensory neurons of the spinal units
C. autonomic nuclei of the spinal cord
D. reticular formation of the spinal cord
E. spinal cord motoneurons *

1012. Traumatic nerve fibers accompanied by destruction of axons, the disintegration of the myelin. Due to some neural structures takes place at the resumption of myelin regeneration?
A. endoneurium
B. ependimocytes
C. perineurium
D. neyrolemmocytes (Schwann cells) *
E. astrocytoma

1013. The patient who received large doses of streptomycin, the hearing loss occurred. The function which cells of the inner ear was damaged in this case?
A. Deiters cells
B. metacarpophalangeal
C. cell columns
D. hair *
E. connective

1014. In the neural tube of the embryo human ectodermal cells differentiate into neuroblasts and spongioblasty. As a consequence of movement of these cells in the neural tube layers are formed. In some of the layers are mainly localized body neurons?
A. mantle layer *
B. ependymal
C. regional veil
D. white Stuff
E. the shell of the spinal cord

1015. Microscopic examination of the body revealed the gray matter of the central nervous system in which neurons form three layers: molecular, ganglionic and granular. Name neurons that form the second layer.
A. pear-shaped *
B. pottle
C. small stellate
D. large stellate
E. cells grain

1016. To the doctor a patient with eye trauma. On examination of the cornea detected changes in the anterior epithelium. What epithelium experienced changes?
A. stratified squamous not keratinizing *
B. single-layer
C. stratified squamous keratinizing
D. multilayer cubic
E. multi-layered cylindrical

1017. Micropreparations eyeball observe fetal damage to the choroid. What is fetal material in the development of the eye probably been damaged?
A. the outer layer of the optic cup
B. ectoderm
C. endoderm
D. mesenchyme *
E. the inner layer of the optic cup

1018. Micropreparations eyeball fetus observed hypoplasia anterior corneal epithelium. Part of embryonic layer, probably was struck during embryonic development?
A. endoderm
B. ectoderm *
C. mesoderm
D. external layer of the optic cup
E. inner layer of optic cup

1019. Investigate the preparations stained by silver impregnation, which are clearly visible cells of different sizes pyramidal shape. From the tops and sides of a short fade processes and from the base - a long one. Name the drug, which is investigated.
A. the cerebral cortex *
B. the spiral organ of the inner ear
C. retina visual organ
D. bark cerebellum
E. spinal unit

1020. Investigate the preparations stained by silver impregnation, in which the visible cells pear-shaped with well developed 2-3 dendrites, which rise up. Name the drug, which is investigated.
A. the cerebral cortex
B. the spiral organ of the inner ear
C. retina visual organ
D. bark cerebellum *
E. spinal unit

1021. As a result of laser vision correction on the score line breaks stratified squamous epithelium of the cornea. Due to some cells of epithelial regeneration occurs?
A. prickly epithelial
B. the basal epithelial cells *
C. fibroblasts
D. fibrocytes
E. lymphocyte

1022. The patient as a result of a viral infection of the spinal neurons died psevdounipolar nodes. What is the link of reflex arcs turned off?
A. sensitive *
B. gusset
C. impellent
D. postganglionar
E. associative

1023. During the lumbar puncture neurologist dotted dura. What fabric of her image?
A. loose connective tissue
B. dense connective tissue *
C. smooth muscle tissue
D. mucosal tissue
E. cartilage tissue

1024. The patient has a tumor of the cerebellum there was poor coordination of movements. Which cells of the cerebellar cortex are damaged?
A. cells-grain
B. small stellate cells
C. large stellate cells
D. pottle cells
E. Purkinje cells *

1025. Newborn found a tumor of the gray matter of the spinal cord. With the injury of embryonic germ is that?
A. ependymoma
B. whipcord area *
C. regional veil
D. crest
E. ganglion plate

1026. The patient developed a clouding of the lens, or cataract. In violation of a structure of the lens is due, and the first place?
A. lens fiber *
B. lens epithelium
C. lens nucleus
D. lens capsule
E. ciliary girdle

1027. On the slides of the cerebral hemispheres of the cerebral cortex revealed large pyramidal cells form, which are the most characteristic feature of the cerebral cortex. The discovery of these cells is associated with the name:
A. Cajal
B. Golgi
C. Lenosheka
D. Nissl
E. Betz *

1028. In histological specimen of the eyeball can be seen a structure that has the form of lenticular education connected to the ciliary body using fibers ciliary girdle on top covered with a transparent capsule. Name this structure?
A. sclera
B. vitreous
C. the ciliary body
D. cornea
E. lens *

1029. Damaged brain injury, glial cells, which often occur in the gray matter of the central nervous system. Which of the following names mentioned are the cells?
A. the fibrous astrocytes
B. fibroblasts
C. plasma cells
D. plasma astrocytes *
E. ependimocytes

1030. An examination of the bottom of the eyeball ophthalmologist paid special attention to the central fovea of the retina. What is this pit?
A. place the best vision *
B. blind Spot
C. the exit of the optic nerve
D. land, where retinal vein out of the eye
E. land retina which contains photoreceptor cells

1031. Boxer after the trauma of the nose there is a violation of smell. Specify the cell damage that can lead to loss of smell.
A. neurosensory cells *
B. supporting epithelial
C. the basal epithelial cells
D. ciliates epithelial
E. micropottle form epithelial

1032. Histopreparation contains the organ with a large number of tubules formed wall which own envelope which is composed of the basal, mioid and fibrous layers. At

basal membrane placed supporting cells and spermatogenic epithelium. What body is represented in the preparation?
A. testis *
B. appendage testis
C. the vas deferens
D. the seminal vesicles
E. prostate

1033. Patients with chronic glomerulonephritis observed symptoms of anemia. What caused the appearance of these symptoms?
A. reduced erythropoietin synthesis *
B. loss of red blood cells in the urine
C. increased destruction of normal red blood cells
D. hemolysis
E. lack of iron for hemoglobin synthesis

1034. As a result of intensive perspiration and dehydration of the patient increased urine osmolality and decreased urine output. Changing production of the hormone is primarily provides compensatory delay water?
A. antidiuretic
B. aldosterone *
C. corticosterone
D. thyroxine
E. insulin

1035. A patient 18 years in the laboratory examination revealed the presence of glucose in urine at its normal concentration in blood plasma. The most accurate reason is the violation:
A. glomerular filtration
B. tubular secretion
C. glucocorticoid secretion
D. insulin secretion
E. tubular reabsorption *

1036. After a stroke with a lesion of hypothalamic nuclei in the patient appeared diabetes insipidus. What causes urinary gain in this patient?
A. reducing sodium reabsorption
B. increase in glomerular filtration rate
C. reducing reabsorption of water *
D. reduction of blood pressure
E. hyperglycemia

1037. In electron microscopy in renal cortex determines the structure expelled prismatic epithelium with brush border and plasmolemma folds in the basal part.

Between the folds have a large number of mitochondria. Which department owns described the structure of the nephron?
A. loop of Henle
B. convoluted distal tubules
C. renal corpuscles
D. straight distal tubule
E. proximal tubules *

1038. At the forensic examination was taken to the corpse of an unknown woman. The panel found in the ovary formation circular diameter of about 5 cm, which comprises a yellow pigment. From which cells is this education?
A. interstitial
B. mioid
C. follicular
D. fibroblasts
E. luteal *

1039. After gynecological surgery, the patient 32 years old, began to complain of pain in the lower abdomen and vaginal discharge. After the examination, the diagnosis - an inflammation of the inner lining of the uterus. What a shell hit?
A. endometrium *
B. myometrium
C. perimetrium
D. parametrium
E. peritoneum

1040. The couple complains of infertile marriages. After the examination, the man found spermatoschesis. Which department of the reproductive system hurt?
A. straight seminiferous tubules
B. network testicles
C. convoluted seminiferous tubules *
D. prostate
E. ureters

1041. As a consequence of suffering orchitis in men 43 years, disrupted the production of sperm. What structures have experienced testicular lesions?
A. straight seminiferous tubules
B. network testicles
C. convoluted seminiferous tubules *
D. prostate
E. vas deferens

1042. Normal implantation of a human embryo can only be a relevant change in the endometrium of the uterus. Any number of endometrial cells will be increased?
A. epithelial cells
B. macrophages
C. myocytes
D. decidua *
E. plasmocytomas

1043. They produce a number of hormones, the placenta acts as a temporary endocrine gland. Which hormone can be identified in the blood of women already on the third or fourth day after the beginning of implantation and is used in medical practice for the diagnosis of early pregnancy?
A. folitropin
B. lyuteotropin
C. gonadotropin
D. chorionic gonadotropin*
E. lactotropin

1044. Malformations of the urinary system are found, according to statistics, 10-14% of newborns. From which of the following sources is marked by the development of the kidneys?
A. splanhnotom
B. mesenchyme
C. nefrogonotom *
D. segment legs
E. allantois

1045. In histological sections see a body that looks and covered with serous tunica. Stroma body is loose connective tissue, which contains Leydig cells, parenchyma presented canals, the inner surface of the tubular lining spermatogenic epithelium. What is this body?
A. ovary
B. appendage testis
C. prostate
D. breast
E. testis *

1046. Women have ovarian hyperemia, increased permeability of the blood-follicle barrier with the subsequent development of edema, infiltration of the wall of the follicle segmented leukocytes. The volume of large follicles. Its walls thinned. What period of the sexual cycle corresponds to the described pattern?
A. the period of relative calm
B. ovulation
C. the menstrual period
D. postmenstrual period
E. pre-ovulatory stage *

1047. On histological preparation buds in the distal convoluted tubule cells are identified that fit snugly to the renal corpuscles. The basement membrane of very fine and does not form wrinkles. These cells can feel the change in urine sodium content, and effect on renin secretion juxtaglomerular cells. What are cells?
A. podocytes
B. juxtaglomerular cells
C. mesangial cells
D. cells dense patches *
E. glomerular capillary endothelial

1048. In the second month of embryogenesis is a bookmark final kidneys (metanephros). From what sources it is formed?
A. segment legs
B. segment legs of renal tissue
C. nephrogenic tissue *
D. mezonefral duct

E. metanephrotic duct tissue metanephrogen

1049. During the clinical examination of 35-year-old woman with kidney disease are found in the urine of blood cells, fibrinogen was significantly associated with impaired renal filter. What are the structures is the filter?
A. the endothelium, podocytes
B. three-layered basal lamina
C. capillary endothelium, basement membrane
D. podocytes, the basement membrane
E. glomerular capillary endothelium, basement membrane is a three-layer, podocytes *

1050. Electron microscopy revealed the kidney tubules, which sent a cubic epithelium. The epithelium distinguish light and dark cells. The bright little cells, organelles. The cytoplasm forms folds. These cells provide the reabsorption of water from the primary urine in the blood. The dark cell in structure and function resemble the gastric parietal cells. What tubules presented?
A. the distal tubules
B. proximal tubules
C. collective renal tubules *
D. rising tubules loop of Henle
E. descending loop of Henle tubules

1051. The patient's pituitary adenoma (tumor in the anterior pituitary gland), an increase in the duration of the growth phase of large follicles. What is the duration of the period of intense growth of oocytes during oogenesis normal?
A. 28 days
B. a few decades (from 10-13 to 40-50) after birth
C. after birth to puberty
D. on the 3 months of prenatal development before birth and
E. 12-14 days *

1052. When the mechanical trauma of the scrotum of the patient revealed a violation of the epithelial lining of the network testis. What epithelium damage suffered?
A. simple columnar
B. ciliated
C. a single-layer cubic *
D. double-row
E. transitional

1053. In an experimental model in rats caused by morphological violation of the epithelial cells of the distal nephron departments. Which functional processes in the kidney while weakened?
A. reabsorption of proteins
B. glucose reabsorption
C. reabsorption of sodium and glucose
D. reabsorption of electrolytes and water *
E. filtering

1054. The patient has significantly increased daily urine. The disadvantage of the secretion of the hormone hypothalamus can explain this phenomenon?
A. vasopressin *
B. oxytocin
C. liberina
D. statins

E. thyroxine

1055. A patient with suspected glomerulonephritis celebrated in the presence of secondary urinary albumin / albuminuria and / glucose / glycosuria / two weeks. The function of any parts of the kidneys broken?
A. distal tubule
B. proximal tubules *
C. thin tubule
D. collecting tubules
E. juxtaglomerular apparatus

1056. An important part of the kidney filtration barrier is a three-level basement membrane, which has a special structure of its average net electron layer. Which contains the basal membrane?
A. the distal straight tubules
B. the capillaries peritubular capillary network
C. in the proximal tubule
D. in the small tubule
E. the renal corpuscles *

1057. Histology endometrium has the following characteristic features: thickening, edema, presence of tortuous glands spread lumen that secrete large amounts of mucus cells in mitosis are not observed in the stroma are decidual cells. What is the stage of the menstrual cycle corresponds to the described pattern?
A. the relative calm
B. menstrual
C. regenerator
D. proliferative
E. secretory (premenstrual) *

1058. The patient (45 years old) with chronic pyelonephritis impaired renal excretory function. How can it be displayed on the function of the skin?
A. activated activity of sebaceous glands
B. activated activity of the sweat glands *
C. to accelerate the process of keratinization
D. increase the number of epidermal macrophages
E. slow down the process of keratinization

1059. The patient (27 years) in the urine sample found traces of protein and glucose. What portion of the nephron thus struck?
A. the distal tubule
B. rising department loop of Henle
C. down Front loop of Henle
D. proximal tubule *
E. glomerulus of the nephron

1060. The patient is 35 years with a diagnosis of infertility in the gynecology department made a diagnostic biopsy of the endometrium. Microscopic examination revealed that the mucosa with symptoms of edema, uterine cancer winding, filled with thick secretion. Which hormone causes such changes in the endometrium?
A. progesterone *
B. estrogens
C. testosterone

D. growth Hormone
E. ACTH

1061. Microscopic examination of the biopsy of the endometrium of a woman who suffers from infertility, found changes in its structure caused by the action of the hormone progesterone. Where this hormone is produced?
A. in the hypothalamus
B. in the ovarian follicles
C. in the anterior pituitary
D. in the posterior lobe of the pituitary gland
E. the corpus luteum of the ovary *

1062. During the mechanical injury of the testis in men noted a violation of the integrity of the walls of many convoluted tubules. Where it leads?
A. the reduction of testosterone synthesis
B. polyspermy
C. increase the amount of testosterone
D. monosperm
E. aspermia *

1063. At 2-3 week embryo development revealed gonoblast - precursors of germ cells. What material differentiate these cells?
A. the dermatomes
B. in the mesenchyme
C. in the embryonic ectoderm
D. in the yolk sac *
E. the embryonic endoderm

1064. The patient detected in the urine leached erythrocytes. Which department of the nephron is damaged?
A. the membrane of renal corpuscles *
B. the proximal tubule
C. loop of Henle
D. the distal tubule
E. collective renal tubules

1065. 4 In preparation of ovarian follicles close to the various orders are atretic body and developed corpus luteum. What stage ovarian-mentrual cycle meets this condition?
A. premenstrual *
B. menstrual
C. postmenstrual
D. regenerator
E. follicle growth

1066. Material renal biopsy is studied by electron microscopy. At selected seen in electron micrographs: fenestrated endothelium to the basement membrane, the outside of which is attached to the epithelial cells with processes. Specify the degree of kidney represented in the electron micrograph.
A. filtration barrier *
B. proximal nephron
C. distal nephron
D. loop of Henle

E. juxtaglomerular apparatus

1067. In section electron micrograph of a kidney in a wall of afferent and efferent arterioles defined cells with large secretory granules in the cytoplasm. Identify the structural formation of the kidney, which is composed of these cells?
A. filtratsiyny barrier
B. proximal nephron
C. distal nephron
D. loop of Henle
E. juxtaglomerular apparatus *

1068. Histopreparation woman's ovaries defined structures that have a large cavity. Oocyte II order them surrounded by a transparent cover, a radiant crown and is located in the cumulus mound. The wall is formed by a layer of follicular cells and teka. Specify which data belong to the structure of ovarian morphological features.
A. mature (tertiary) follicle *
B. primordial follicles
C. the primary follicles
D. the yellow body
E. atretic body

1069. Histopreparation female ovary detected structure rounded shape, which consists of large glandular cells containing lutein pigment. In the center of this structure is the small size of connective tissue scar. Specify the structure of the ovary.
A. the white body
B. mature follicles
C. corpus albicans
D. the secondary follicles
E. yellow body *

1070. In the analysis of the patient's urine found leached erythrocytes. Where possible localization of the pathological process?
A. filtration barrier *
B. proximal nephron
C. collecting ducts
D. distal nephron
E. thin front nephron

1071. In the blood of women found to increase the amount of estrogen. Which cells produce estrogen?
A. oocytes
B. interstitial follicular cells and secondary follicles *
C. follicular cells of primary follicles
D. follicular cells of primordial follicles
E. follicular cells and oocytes

1072. To cut normal ovarian structure observed irregularly shaped bright pink (H & E stain). As a result, the structure formed?
A. education white body
B. education luteum
C. ovulation
D. follicle atresia *

E. necrosis follicle

1073. In the study of the seminal fluid from the patient 25 years old was found insufficient number of germ cells. Which cells of male sex glands usually provide sufficient number of sperm for fertilization?
A. spermatogonia *
B. sustentocytes
C. support cells
D. Sertoli cells
E. Leydig cells

1074. The patient found the woman anovulatory menstrual cycle. What is the process of the following occurs?
A. the decrease in the mature follicle
B. the restructuring of the follicle after the death of the oocyte
C. granular layer cell reproduction
D. the accumulation of lutein follicular cells
E. rupture of the follicle and out of the oocyte into the abdominal cavity *

1075. The patient 50 years old with chronic nephritis developed anemia. What is the most likely cause of anemia in this patient?
A. violations of the synthesis of porphyrin
B. lack of iron
C. lack of vitamin B12
D. reduced production of erythropoietin *
E. immunological damage to cells - precursors of erythropoiesis

1076. The urine of the patient 30 is detected in the normal sugar amount in his blood. What are the structural and functional mechanisms of kidney damage?
A. process filtration
B. the process of reabsorption in the proximal nephron *
C. process reabsorption in the distal nephron
D. process reabsorption in the small tubules
E. the process of reabsorption in the distal insufficiency resulting secretion of ADH

1077. In the analysis of blood of non-pregnant women age 26 years found low concentrations of estrogen and progesterone high. At what stage of ovarian-menstrual cycle was made a blood test?
A. premenstrual phase (secretory) *
B. menstrual phase
C. postmenstrual phase (proliferative)
D. phase desquamation
E. phase endometrial proliferation

1078. When breast biopsy found star-shaped cells located between the basement membrane and laktocytes. What are the sources of these cells?
A. myotome
B. sclerotome
C. skin ektoderma *
D. dermatome
E. nefrogonotom

1079. A woman of 50 years found an ovarian cyst. From what structure it has developed?

A. by the follicle *
B. the stroma of the cortex
C. atretic body
D. white body
E. interstitial cells

1080. Electron microscopy in renal cortex defined structures that sent prismatic epithelium, which is characterized by brush border and deep folds plasmolemma in the basal part. Between the folds is a large number of mitochondria. Which department owns described the structure of the nephron?
A. proximal tubules *
B. direct the distal tubule
C. convoluted distal tubules
D. loop of Henle
E. renal corpuscles

1081. At the forensic examination of the corpse was taken to an unknown woman. When cut in a rounded structure ovary detected diameter of about 5 cm, which comprises a yellow pigment. Pathological changes in the ovary is detected. From which cells is this structure?
A. luteal *
B. follicular
C. interstitial
D. mioid
E. fibroblasts

1082. When a biopsy of the endometrium healthy woman, taken in the secretory phase of the menstrual cycle in the lamina propria cells found polygonal shapes rich on lipids and glycogen. What are these cells?
A. fibroblasts
B. smooth muscle cells
C. endothelial cells damaged vessels
D. myofibroblasts
E. decidua cells *

1083. In histological specimen the kidneys show a segment of the nephron distal tubule that passes between the afferent and efferent arterioles. The cells that make up the wall of the tubule, tightly arranged nucleus absent basement membrane. What do you call a structural education?
A. juxtavascular cells
B. cells Gurmagtiga
C. mesangial cells
D. tight spots *
E. juxtaglomerular cells

1084. In damage occurred during embryogenesis somite first four legs. The development of any of experiencing a major change?
A. development of the spleen
B. development of the liver
C. development of the pancreas
D. development of the right adrenal gland
E. development pronephros *

1085. In a patient with kidney disease is an increase in blood pressure. What structures are the cause of the kidney to increase blood pressure?

A. proximal tubular cells
B. juxtaglomerular cell *
C. the cells of the distal tubule
D. cells dense patches
E. cells loop nephron

1086. When kidney disease can be damaged podocytes. What are the functional changes in this occur?
A. increase filtering protein *
B. decrease filtering protein
C. increase the secretion of renin
D. reduce the secretion of renin
E. it will increase the secretion of prostaglandin

1087. At histological examination of kidney cortex is determined by tubule, which is sent to a single layer of cubic limbic epithelium, the cytoplasm is colored oxyphilic. Specify which department nephron found in the product?
A. loop of Henle
B. collecting ducts
C. the distal twisted tubule
D. distal straight tubule
E. proximal convoluted tubule *

1088. In the electron micrograph shows a fragment of the renal corpuscles large epithelial cells with large and small branches. Recent attached to the basement membrane of capillaries. Call this cell?
A. endotheliocyte
B. juxtavascular cell
C. smooth myocyte
D. podocyte *
E. mesangial cells

1089. Normally, when the laboratory examination of urine in it undetectable blood cells. What is the structure of the nephron most hinders their admission to primary urine?
A. juxtavascular cells
B. basement membrane glomerular capillaries *
C. mesangial cells
D. the epithelium of the outer layer of the capsule glomerulus
E. the epithelium of the loop of Henle

1090. Laboratory analysis of urine of the patient revealed that she has a slightly acid reaction. What are kidney cells provide the reaction of urine?
A. secretory cells collecting ducts *
B. juxtaglomerular cell cortical nephrons
C. juxtavascular cells cortical nephrons
D. cells dense patches juxtaglomerular apparatus
E. interstitial cells of the stroma

1091. Preparation kidney nephrons revealed that lie on the boundary between the cortex and medulla. They have the same diameter of the afferent and efferent arterioles. What, what function would be impaired if they are damaged?
A. shunting of blood with vigorous circulation *
B. synthesis of renin

C. the synthesis of prostaglandins
D. synthesis of erythropoietin
E. activity sodium receptor

1092. In the electron micrograph of one of the departments of the nephron cells determined by the cubic form, the apical surface of which contains the brush border and basal - basal striations with mitochondria located between the invaginations tsitolemmy. Name of the nephron.
A. the distal tubule
B. collective renal tubules
C. proximal tubule *
D. thin tubule
E. glomerular capsule

1093. Preparation ovary stained with hematoxylin-eosin determined follicle in which the cells are placed in the follicular epithelium layer 1-2 and have a cubic shape, seen around the oocyte shell bright red color. Name the follicle?
A. primary *
B. primordial
C. secondary
D. mature
E. atretic

1094. The complex of endocrine cells under the kidney endothelium in the wall of afferent and efferent arterioles contain granules in the cytoplasm of renin, which contributes to an increase in blood pressure. What are cells?
A. mezangiocytes
B. cells Gurmagtiga
C. cells dense patches
D. juxtaglomerular *
E. interstitial cells

1095. In the ovarian-menstrual cycle changes occur endometrial glands. What type of cancer they belong?
A. simple unbranched tubular *
B. simple branched tubular
C. simple alveolar unbranched
D. complex alveolar unbranched
E. complex alveolar-tubular branched

1096. In urinalysis revealed epithelial cells of the small tubules of the nephron. How epithelium sent a wall of the tubule of the nephron?
A. flat *
B. cubic
C. cubic limbic
D. prismatic
E. prismatic ciliated

1097. Inflammation of the urinary system helps change slightly acidic urine, which has bactericidal properties, to slightly alkaline. In what department of kidney urine becomes acidic reaction?
A. collecting ducts *
B. renal pelvis

C. proximal
D. thin tubule
E. distal tubule

1098. In patient with chronic pyelonephritis occurs acidification of urine, so its bactericidal action. What are the structures of kidney damage took place?
A. in the glomerulus
B. in the dark cells of collecting tubules *
C. in the podocytes capsules
D. in the proximal tubules of the winding
E. in the distal tubule

1099. At preparation clearly visible dense network of capillaries located between two arterioles (rete mirabile). In what organ can find this grid?
A. in the kidney *
B. in the liver
C. in the adrenal gland
D. in the spleen
E. the retinal

1100. At electron micrographs of renal corpuscle between the glomerular capillary vascular cells with defined processes in the cytoplasm of which have a large number of filaments. Name these cells.
A. adventitia
B. mesangial *
C. juxtaglomerular
D. juxtavascular
E. fibroblasts

1101. Identify sources of the yolk sac of human?
A. the embryonic ectoderm
B. extraembryonic endoderm*
C. germ mesenchyme
D. extraembryonic mesoderm*

1102. What are the fabric layers is the amniotic sac?
A. the amniotic epithelium *
B. connective tissue layer *
C. trophoblastichorial epithelium
D. cytotrophoblast

1103. From which germ layers develop epithelial tissue?
A. only from the ectoderm and mesoderm
B. only the ectoderm and endoderm from
C. in the ectoderm, mesoderm and endoderm*
D. out of all three germ layers *

1104. What epithelium belong to the group of singlelayer, according to the morphological and functional classification?
A. single row*
B. stratum
C. pseudostratified*
D. transition

1105. What type of apocrine secretion called?
A. the secret is released without destruction glandulocyte
B. the secret is allocated to the total destruction glandulocyte
C. the secret is allocated to the destruction of microvilli glandulocyte*
D. the secret is allocated to the destruction of the tops glandulocyte *

1106. What are the main functions of eosinophils?
A. inactivation of histamine *
B. phagocytosis of microorganisms and particles
C. phagocytosis of the antigenantibody complex
D. participation in allergic and anaphylactic reactions *

1107. The composition of hemoglobin in red blood cells of the adult?
A. HbA 98% *
B. HbF 70%
C. HbA 30%
D. HbF 2% *

1108. Specify the main features of dense connective tissue:
A. the prevalence of the main substance
B. the monotony of the cells*
C. the prevalence of fiber *
D. the variety of cells

1109. Determine the function of fibroblasts:
A. phagocytosis
B. participation in basic education (amorphous)*
C. the antibodies
D. procollagen synthesis and elastin *

1110. What are the functions of macrophages?
A. the synthesis and formation of collagenous fibers
B. phagocytosis*
C. presentation of antigens*
D. antibody production

1111. Determine the function of plasma cells:
A. production of antibodies *
B. the formation of intercellular substance
C. participation in inflammation*
D. phagocytosis

1112. Specify the cells capable of secreting histamine:
A. eosinophils
B. basophils *
C. monocytes
D. mast cells *

1113. Select the cells that are actively involved in phagocytosis:
A. neutrophils*
B. lymphocytes

C. macrophages*
D. basophils

1114. What processes ensure the growth of cartilage tissue after birth?
A. of mesenchymal neoplasm
B. apposition growth*
C. interstitial growth *
D. intracellular regeneration

1115. What types of bone:
A. the plate *
B. foam
C. coarse fiber*
D. compact

1116. Hyaline cartilage present in:
A. rib*
B. the site of attachment of tendon to bone
C. the trachea and bronchi*
D. of the intervertebral disc

1117. What proteins are parts of the myofibrils?
A. myosin*
B. actin *
C. keratin
D. collagen

1118. Which of the following is not an organelle found in cardiomyocytes?
A. the total value of organelles
B. epitheliofibrillary*
C. neurofibrillary *
D. myofibrils

1119. What is characteristic of cardiac muscle tissue?
A. muscle fibers are composed of cells*
B. good cell regeneration
C. muscle fibers anastomose with each other*
D. regulated by the somatic nervous system

1120. What structures are formed neurofibrils?
A. mitochondria
B. lysosomes
C. microtubules*
D. neurofilament*

1121. What are the organelles involved in the active transport of substances spikes neurons?
A. microtubules*
B. neurofilament*
C. mitochondria
D. ribosomes

1122. With the introduction of colchicine is the destruction of the cytoskeleton what this happens when the cytoplasm of neurons?
A. the disappearance of the Golgi complex
B. the disappearance of neurofibrillary*
C. violation axons flow*
D. mitochondrial damage

1123. Structural components of the nervous tissue:
A. neurons*
B. glia *
C. main (amorphous)
D. reticular fiber

1124. Where are the oligodendrocytes?
A. around perikaryonic neurons*
B. around the processes of neurons*
C. lining the ventricles of the brain and channels
D. around the blood vessels of the brain

1125. What is the function of microglia?
A. dividing the barrier
B. trophic
C. safety*
D. engaged in phagocytosis of damaged nerve tissue*

1126. What is the function of the axons of the nerve fiber?
A. of nerve impulses *
B. provision of cytoplasmic current*
C. generated nerve impulse
D. moving neurocyte

1127. What are the structural elements of the nervous tissue to form nerve fibers?
A. cells oligodendroglial *
B. microglial cells
C. fibrous astrocytes
D. processes of nerve cells*

1128. What gliocytes play a major role in the regeneration of nerve fibers?
A. Schwann cells *
B. lemmocyte *
C. ependimocyte
D. fibrous astrocytes

1129. Where the mediator of synaptic vesicles filled with peptidergic neurons?
A. the neuronal perikaria*
B. the complex Golgi perikaryon*
C. during the movement along the axon
D. in the synapse

1130. As a mediator removed from the synaptic cleft?
A. destroys the enzymes of the postsynaptic membrane*
B. is captured proteins presynaptic membrane transporters*

C. is gradually disappearing by passive diffusion
D. is captured postsynaptic part of a synapse

1131. What are the nerve endings are effector?
A. neuromuscular end *
B. ending in glandular cells*
C. neuromuscular spindles
D. axosomatic synapses

1132. Through anterior roots of the spinal cord are:
A. the afferent nerve fibers
B. the efferent nerve fibers *
C. preganglionic nerve fibers*
D. postganglionic nerve fibers

1133. Where are the sensory neurons?
A. the spinal sites *
B. the rear horn of the spinal cord
C. in the anterior horn of the spinal cord
D. in the intramural ganglia *

1134. The bloodbrain barrier is:
A. perivascular spaces
B. the totality of the components of the capillary walls and glial elements between blood and nerve cells*
C. the terminal expansion axons neurocytes
D. the barrier between blood and brain neurons*

1135. The cerebellum performs the following functions:
A. the role of the central sympathetic nervous system
B. the role of the analyzer all sensory information
C. coordination of movements*
D. regulation of body balance in space*

1136. "Pottle form" pearshaped around the Purkinje neurons form:
A. scansorial fiber
B. the axons of granule cells
C. the axons of the stellate cells of the molecular layer*
D. axons of pottle form cells *

1137. Afferent information is received by the cerebellum:
A. mossy fibers *
B. axons of Purkinje cells
C. scansorial fibers*
D. axon cells grains

1138. The defeat of the cerebellum is accompanied by:
A. incoordination*
B. breach of sensory innervation of the skin
C. visual impairment
D. disequilibrium*

1139. What are the neurons in the cerebellar cortex?
A. multipolar*
B. intercalated, associative*
C. bipolar
D. the motor effector

1140. What structures form synapses with Purkinje cells?
A. the axons of granule cells*
B. the dendrites stellate cells
C. scansorial fiber*
D. spread moss family fiber

1141. What are the sensory organs containing primary sensory cells?
A. the body of *
B. the organ of hearing
C. the body taste
D. body smell*

1142. What are the senses contain secondary sensory cells?
A. of the authority
B. the organs of hearing and balance*
C. organ taste*
D. the olfactory organ

1143. What is the structure of the "blind spot" of the retina?
A. wands little cones become rodshaped
B. gathering the axons of ganglion cells from the optic nerve*
C. cones are disappearing
D. formed by a layer of nerve fibers *

1144. How is the power of the cornea?
A. own blood vessels
B. liquid anterior chamber *
C. liquid posterior chamber of the eye
D. by diffusion from the limb vessels*

1145. What is the function of the macula utricles inner ear?
A. the perception of linear acceleration*
B. the perception of angular acceleration
C. the perception of vibrations
D. perception of gravity*

1146. What is the function of the macula spherical sac inner ear?
A. the perception of linear acceleration
B. the perception of angular acceleration
C. the perception of vibrations*
D. perception of gravity*

1147. Which cells are receptor cells of taste buds?
A. sensoepithelial*
B. second jitteriness*
C. sensorineural

D. fast jitteriness

1148. What types of veins are separated?
A. muscleelastic
B. muscle *
C. the simple
D. unmuscle*

1149. Which of the following features inherent in the veins of the muscle type
A. strong development of muscular elements?
B. the strong development of the tunica vessel*
C. poor expressed under endothelial layer
D. bundles of smooth muscle cells found in the inner and outer shells*
E. average shell is absent

1150. What is the source of the heart?
A. mesenchyme*
B. a piece of the parietal ventral mesoderm
C. visceral layer of ventral mesoderm*
D. the endoderm

1151. The capillaries all true, except:
A. contain pericytes
B. contain smooth muscle cells *
C. the exchange of substances between blood and tissues
D. contain mesothelium*

1152. What are the bloodforming organs are central?
A. lymph nodes
B. thymus*
C. the spleen
D. red bone marrow*

1153. What processes take place in the red bone marrow
A. formation of erythrocytes, granulocytes, platelets, monocytes*
B. education lymphocyte precursors*
C. conversion of precursor T-lymphoblasts in the T-lymphocytes
D. reproduction of T and Blymphocytes and their specialization into effector cells

1154. What are the morphological changes accompany the maturation of cells erythrocyte series?
A. reducing the size of the cell and the nucleus, the disappearance of the nucleus*
B. first increase and then decrease internal content of cells
C. accumulation of hemoglobin and growth oxiphile cytoplasm *
D. the segmentation of the nucleus

1155. What are the morphological changes accompany the maturation of cells granulocytic series?
A. the disappearance of the nucleus
B. accumulation in the cytoplasm of a specific grain *
C. the change of the nuclear shape from rounded to the segmented*
D. the accumulation of hemoglobin

1156. What are the morphological changes during maturation occur in megakaryocytes?
A. reduction of the size of the cell
B. the increase in the size of the cells *
C. polyploidy and segmentation *
D. the disappearance of the nucleus

1157. Where to begin antigendifferentiation of Blymphocytes?
A. in the paracortical area lymph node
B. on the red bone marrow
C. in the lymphoid follicles of the spleen*
D. in lymphoid follicles cortical zone lymph node*

1158. What structures create bloodthymus barrier?
A. endothelial cells of capillaries with the basement membrane and located outside epithelioreticulocyte
B. fibroblasts are connective tissue layers between the slices*
C. pericapillary space *
D. collagen fibers interlobular connective tissue

1159. What are the morphological characteristics of thymic involution age cancer?
A. the growth of epithelial tissue
B. reduction of the number of lymphocytes*
C. the development of fat and connective tissue *
D. increase in the number of lymphocytes

1160. The stroma is formed of hematopoiesis and immunogenesis?
A. capsules and layers of connective tissue *
B. the reticular or epitelioreticular cloth *
C. bone tissue
D. loose connective tissue

1161. What is different from the yellow marrow red?
A. the lack of developing blood cells *
B. strong development of adipose tissue*
C. the absence of fat cells
D. strongly developed reticulum

1162. As the lymph flows inside the lymph node?
A. at the lymph sinuses *
B. from the gateto edge sine
C. by the lymphatic vessels
D. from the bringing of the lymphatic vessels in sines to the gate lymph nodes*

1163. What happens to the lymph as it passes through the lymph node?
A. cleared*
B. is enriched lymphocytes*
C. it reduces the number of lymphocytes
D. it fall granulocytes and platelets

1164. What happens in the spleen?

A. formation of erythrocytes and platelets
B. the destruction of red blood cells and platelets*
C. antigenproliferation and differentiation of Tand Blymphocytes*
D. education precursor T and Blymphocytes

1165. The formed stroma of the spleen?
A. connective tissue *
B. reticulum *
C. adipose tissue
D. epithelial tissue

1166. The formed white pulp of the spleen?
A. lymph follicles*
B. clusters of basophilic leukocytes
C. myeloid tissue
D. lymph periarterial sheaths*

1167. Which of the following cells are basophile endocrinocyte adenohypophis?
A. endocrinocyte
B. somatotropocyte
C. tirotropocyte*
D. gonadotropocyte*

1168. Which of the following cells are acidophilic endocrinocyte adenogipophis?
A. somatotropocyte*
B. gonadotropocyte
C. corticotropocyte
D. laktotropocyte (mammotropocyt)*

1169. Which of these cells produce liberins and statins?
A. adenocytes average share adenohypophysis
B. endocrine cells of the anterior pituitary
C. small neurosecretory cells of the hypothalamus*
D. neurosecretory cells arcuate and ventromedial hypothalamic nuclei *

1170. What are the structural features of the follicles when hyperthyroidism?
A. the increase in the size of the follicles
B. the increase in the height of thyrocytes *
C. reducing the size of the follicles*
D. flattening of thyrocytes

1171. What hormones produce parafollicular endocrinocyte thyroid?
A. monoiodotyrosine, diiodotyrosine
B. thyroglobulin
C. calcitonin, somatostatin *
D. serotonin *

1172. What are the cells of the hypothalamus liberins and statins?
A. bazophille adenocyte pituitary*
B. oxiphille adenocyte pituitary *
C. neurohypophysis pituitary cells
D. thyrocyte thyroid

1173. Which hormone is produced epiphysis?
A. serotonin*
B. melatonin*
C. vasopressin
D. somatostatin

1174. What are the structural features of the oral mucosa?
A. is lined with transitional epithelium, no submucosa
B. are lined with a single layer of prismatic ciliated epithelium
C. in some places there is no submucosa and muscularis mucosa*
D. is covered by stratified squamous epithelium not keratinizing*

1175. What forms of dental papilla?
A. the pulp of the tooth *
B. dentin of the tooth *
C. cement tooth
D. the enamel of the tooth and the cuticle

1176. What is the significance of the dental sac?
A. forms a tooth pulp
B. forms a tooth dentin
C. forms a cement of the tooth*
D. forms a periodontal *

1177. Which bodies belong to the middle of the digestive system?
A. of the esophagus
B. stomach*
C. intestine*
D. the anal part of the rectum

1178. In what layer membrane of the stomach and lymphoid follicles found?
A. in the lamina propria*
B. on the submucosa *
C. in muscle
D. in serous

1179. What is the function of gastric glands cervical cells?
A. regenerator*
B. production of chloride and antianemic factor
C. development of pepsinogen
D. mucus production*

1180. Where is their own cancer of the esophagus?
A. during the submucosa*
B. during the entire esophagus*
C. only in its own layer of the mucosa
D. only in the upper third of the esophagus

1181. What structures are particularly well developed in the parietal cells?
A. mitochondria*
B. intracellular secretor tubules*

C. granular cytoplasm network
D. Golgi complex

1182. Where are their own stomach cancers?
A. during the body and the bottom of the stomach*
B. in the cardia of the stomach
C. in its own layer mucosal *
D. in the submucosa

1183. What kind of structure and composition of the secretion of gastric cancer is its own?
A. compound alveolartubular
B. simple tubular *
C. only mucous
D. mixed*

1184. What is the stomach epithelium covers the outside?
A. stratified squamous not keratinizing
B. transition
C. simple squamous*
D. mesothelium*

1185. Where in the stomach are the nerve ganglia?
A. during own layer of mucous
B. on the submucosa*
C. between the layers of the muscle membrane *
D. outside the stomach

1186. What structures form the relief of the mucous membrane of the colon?
A. circular folds*
B. the villi
C. crypt *
D. dimples

1187. What is in the stroma of the liver?
A. a connective tissue capsule around the body*
B. layers of the loose connective tissue between the hepatic lobules*
C. hepatic beams
D. interlobular bile ducts

1188. For some vessels the blood flows away from the liver lobules?
A. interlobular veins
B. interlobular artery
C. the center vein *
D. sublobular veins*

1189. Which (in structure and method for isolating secret) are sweat cancer?
A. simple tubular *
B. complex pipe
C. merocrine or apocrine*
D. only merocrine

1190. In which layers of the epidermis are melanocytes?
A. basal *
B. prickly*
C. grainy
D. brilliant

1191. What are the skin cells regulate the proliferation and differentiation keratinocytes?
A. epidermal macrophages (Langerhans cells)*
B. Merkel cells*
C. melanocytes
D. lymphocytes

1192. What is a classic liver lobule?
A. hepatic beams*
B. hepatic plates
C. sinusoidal capillaries*
D. layers of connective tissue

1193. Kidney cortex consists of:
A. renal corpuscles*
B. direct descending and ascending parts of the nephron loops
C. the proximal and distal convoluted tubules*
D. collecting tubules

1194. The functions of the nephron hormones regulate the following:
A. vasopressin (antidiuretic hormone)
B. progesterone
C. aldosterone*
D. somatostatin

1195. What are the components of the blood cannot pass through the filtration barrier?
A. blood cells *
B. sugar (carbohydrates)
C. fibrinogen, gamma globulin*
D. the mineral salts

1196. What structures are needed in the cells of the main department for nephron reabsorption?
A. microvilli (brush border) *
B. basal folds and mitochondria*
C. a welldeveloped Golgi complex
D. the granular endoplasmic reticulum

1197. Which cells secrete renin?
A. mesangial*
B. juxtaglomerular*
C. podocytes
D. cells dense patches

1198. What are the kidneys produce erythropoietin cells?
A. cells dense patches of the distal tubule
B. juxtaglomerular cell

C. juxtavascular cells*
D. podocytes *

1199. What are kidney cells produce hypotensive prostaglandins?
A. interstitial cells*
B. light cells of the collecting ducts*
C. juxtaglomerular cell
D. podocytes

1200. What are the embryonic beginnings of which are developing testes (testicles):
A. the intestinal endoderm
B. colonic epithelium*
C. the neural tube
D. gametoblasts *

1201. What are the hormones stimulate spermatogenesis in the testes?
A. folliclestimulating hormone*
B. oxytocin
C. prolactin
D. testosterone *

1202. What distinguishes the cells in the epithelium of efferent tubules forming the head of the epididymis?
A. highciliated*
B. low secretory*
C. goblet
D. tworow epithelium with stereocilia

1203. What spermatogenic cells are haploid set of chromosomes?
A. spermatocytes 1st order
B. spermatocytes 2 nd order
C. spermatids*
D. sperm*

1204. The corpus luteum of the ovary is characterized by the following features:
A. is developed on the site of atretic follicles
B. is the exocrine glands
C. is an endocrine gland*
D. develops during the premenstrual period*

1205. Under the influence of some forms of pituitary hormones and functioning corpus luteum of the ovary?
A. follicle
B. luteinizing*
C. lactotropic (prolactin)*
D. estrogens

1206. When formed and that secretes corpus luteum of the ovary?
A. during postmenstrual phase
B. during the premenstrual phase*
C. progesterone *
D. estrogens

1207. When it is the large growth stage oocytes, and that they occur?
A. during the premenstrual phase
B. in the postmenstrual phase *
C. the accumulation of yolk inclusions in the oocyte*
D. meiotic division

1208. What structures are in the cortex of the ovary to the menstrual phase?
A. mature follicles
B. the corpus luteum
C. primordial follicles*
D. white body *

1209. For postmenstrual (follicular) phase of the menstrual cycle characterized by:
A. desquamation functional layer of the endometrium
B. reduction of the functional layer of the endometrium*
C. the presence of the corpus luteum in the ovary
D. the growth of follicles in the ovary *

1210. Under the influence of any growth hormone occurs after the breast puberty and during pregnancy?
A. estrogens *
B. progesterone*
C. follicle
D. lactotropic

1211. Which cells are found in the epithelium of the oviduct?
A. basal
B. ciliates*
C. secretory*
D. goblet

1212. As constructed vagina?
A. it is a layered body*
B. it parenchymal organ
C. consists of mucous, muscular and adventitia shells*
D. consists of mucous, muscular

1213. As constructed vagina?
A. it is a layered body *
B. it parenchymal organ
C. consists of mucous, muscular and adventitia shells*
D. consists of mucous, muscular and serous membranes

1214. What are ovarian hormones regulate the menstrual cycle?
A. lactotropic
B. estrogens*
C. progesterone*
D. follicle

1215. Granular white blood cells include:

A. lymphocytes
B. neutrophils *
C. eosinophils
D. basophils *

1216. Indicate tissue with special properties:
A. bone
B. the fat *
C. reticular*
D. cartilage

1217. By the mononuclear phagocyte system include:
A. Kupffer cells of the liver*
B. blood granulocytes
C. fibroblasts are connective tissue
D. macrophages light *

1218. Tigroid missing in:
A. perikarion
B. dendrite
C. axons *
D. axon hillock*

1219. The wall of the vein muscular type does not contain:
A. endothelial
B. layer underendotelial
C. internal elastic membrane*
D. external elastic membrane *

1220. According to the structure of the arterial wall are classified into:
A. muscle
B. amyous
C. elastic *
D. muscleelastic*

1221. Vaza vasorum provide meals:
A. inner shell
B. tunica *
C. of the outer shell*
D. the endothelium

1222. By the elastic arteries are:
A. the aorta *
B. pulmonary artery*
C. organ artery
D. arteries

1223. The capillaries are fenestrated type:
A. kidneys*
B. of the endocrine glands*
C. skeletal muscle
D. at the heart of

1224. The capillaries somatic type are:
A. kidneys
B. of the endocrine glands
C. skeletal muscle *
D. light *

1225. The capillaries are perforated type:
A. lung
B. exocrine glands
C. liver*
D. of the blood*

1226. Pericytes found in the wall:
A. postcapillary venules*
B. the collecting venules
C. muscular venules
D. capillaries *

1227. The antigendifferentiation and proliferation of Blymphocytes occurs:
A. bone marrow
B. of the thymus
C. spleen *
D. lymph nodes*

1228. Gematotimus barriers to entry:
A. the endothelium and basement membrane*
B. and basement membrane mesothelium
C. pericapillary space *
D. and basement membrane reticuloendoteliocyte

1229. Secretory epitelioreticulocyte thymus produce:
A. thymosin *
B. thymulin *
C. histamine
D. thymopoietin

1230. Red bone marrow in the adult is located in:
A. flat bones *
B. of the diaphysis of long bones
C. the epiphysis of long bones*
D. the periosteum and endosteum

1231. The function of the macrophages of the brain is red:
A. the capture of blood iron compounds*
B. the transfer of iron compounds to developing red blood cells*
C. formation of platelets
D. secretory

1232. The thyroid hormones are:
A. thyroxine *
B. triiodothyronine*

C. somatostatin
D. thyrotropin

1233. To bodies uniting endocrine and not endocrine function include:
A. thyroid
B. the pancreas *
C. pituitary
D. testes *

1234. Gipophise dependence endocrine glands are:
A. thyrocytes of the thyroid gland*
B. parathyroid glands
C. adrenal cortex
D. adrenal medulla *

1235. To gipophise independence endocrine glands are:
A. thyroid
B. parathyroid glands*
C. adrenal cortex
D. adrenal medulla *

1236. Corpus Herring educated axon terminals of neurosecretory cells:
A. supraoptic nucleus of the hypothalamus *
B. cholinergic neurons in the paraventricular nucleus of the hypothalamus*
C. the arcuate nucleus of the hypothalamus
D. the dorsomedial nucleus of the hypothalamus

1237. Gonadotropocyte anterior pituitary synthesized:
A. follitropin *
B. lutropin *
C. melanotropin
D. lipotropina

1238. Corpus Herring accumulate hormones:
A. follitropin
B. oxytocin*
C. thyrotropin
D. vasopressin*

1239. Wall thyroid follicles consist of:
A. thyrocites *
B. tirotropocyte
C. calcyteoninocyte*
D. fibroblasts

1240. The intermediate zone of the adrenal cortex functions as:
A. synthesis of hormones
B. regeneration glomerular zone
C. regeneration beam area*
D. regeneration netted area *

1241. The organs containing primary sensory neurosensory cells include:

A. the organs of taste
B. the body of *
C. the organ of hearing
D. the olfactory organ*

1242. The organs containing secondary sensory cells sensoepithelial include:
A. the body of taste *
B. the body of
C. the organ of hearing*
D. the olfactory organ

1243. The outer nuclear layer of the retina is formed by:
A. bodies sticks *
B. the bodies of bipolar cells
C. bodies of cones*
D. bodies amacrine cells

1244. The inner nuclear layer of the retina is formed by:
A. the bodies of bipolar cells*
B. bodies sticks
C. bodies of horizontal cells *
D. the bodies of ganglion cells

1245. The eye develops from the rudiments of the following:
A. endoderm
B. ectoderm *
C. prechordal plate
D. mesenchyme*

1246. Accommodative apparatus of the eye are:
A. the retina
B. iris *
C. vitreous
D. to the ciliary body processes*

1247. Dioptric apparatus of the eye are:
A. cornea *
B. retina
C. vitreous *
D. the ciliary body

1248. The structure of the olfactory epithelium cells include:
A. fatty
B. the olfactory neurosensory*
C. supported *
D. pigment

1249. Middle ear consists of:
A. snails
B. the tympanum*
C. of the semicircular canals
D. of the auditory ossicles*

1250. The structure of the inner ear structure includes:
A. the tympanum
B. snail *
C. the tympanic membrane
D. semicircular canals*

1251. The reactions of humoral immunity are involved:
A. erythrocytes
B. plasma cells *
C. Blymphocytes*
D. Tkiller lymphocytes

1252. Bone serves as a:
A. support mechanical
B. the exchange of calcium and phosphorus*
C. participate in gas exchange
D. participated lipid metabolism*

1253. Cartilage tissue includes:
A. collagen fibers *
B. main amorphous*
C. vessels
D. smooth muscle cells

1254. Power of the articular cartilage is carried out:
A. depletion water deep zones*
B. cartilage material between cells
C. sinovial joint cavity fluid *
D. intercellular substance bone

1255. The bone tissue develops during embryogenesis:
A. on the site of hyaline cartilage*
B. on the site of elastic cartilage
C. from mesenchyme *
D. from the loose connective tissue

1256. Glia perform the following functions:
A. support*
B. secretory*
C. conductive
D. endocrine

1257. Neurofibrillary operate in the neuron:
A. the function of the excitation
B. musculoskeletal mechanical function*
C. transport function *
D. exchange function

1258. The physiological regeneration of nervous tissue is provided:
A. mitoz cambium cells microglia*
B. mitotic dividing neurons

C. cells neuronal regeneration *
D. neuronal hypertrophy

1259. Gusset (association) neurons somatic reflex arcs are located in:
A. spinal sites
B. rear horns of the spinal cord *
C. the lateral horns of the spinal cord *
D. anterior horns of the spinal cord

1260. The structural components of the nucleus of tissue cells include:
A. kariotheca *
B. karyoplasm *
C. ribosomes
D. mitochondria

1261. Switching fabric secretory cells are:
A. hormones *
B. enzymes *
C. products of metabolism
D. vitamins

1262. The blastocyst consists of:
A. trophoblast*
B. embryoblast*
C. epiblast
D. hypoblast

1263. As a result of meiosis formed:
A. diploid cells *
B. haploid cells *
C. polyploid cells
D. tetraploid cells

1264. Composed of human egg shells are:
A. amnion
B. radiant crown *
C. shiny shell *
D. trophoblast

1265. In the human embryo during gastrulation, the first phase is formed:
A. epiblast *
B. hypoblast*
C. the neural plate
D. chordal plate

1266. The head of the sperm are:
A. the core *
B. the acrosome*
C. axoneme
D. basal body

1267. In the human embryo after completion of gastrulation, embryonic inner leaf contains:

A. endoderm *
B. mesoderm
C. prechordal plate*
D. neural plate

1268. Human eggs:
A. oligolecyteal *
B. polilecyteal
C. izolecyteal *
D. telolecithal

1269. Chorion develops from:
A. ectoderm
B. endoderm
C. extraembryonic mesoderm *
D. trophoblast *

1270. Mother of the placenta contains:
A. sept *
B. lacunas*
C. amnion
D. the villi

1271. The input of the second phase of gastrulation is formed:
A. epiblast
B. hypoblast
C. of the primitive streak*
D. the primary bundle *

1272. From the endoderm develops:
A. the epithelium of the stomach*
B. the epithelium of the esophagus
C. epithelium liver and pancreas *
D. the epithelium of the anal part of the rectum

1273. The mechanism of gastrulation in humans
A. immigration *
B. delamination *
C. epiboly
D. implantation

1274. What is the function of the yolk sac?
A. form the primary germ cells*
B. development of amniotic fluid
C. the immunological defense
D. forms a primary hematopoietic cells*

1275. Amnion executes the following function
A. the development and reabsorption of amniotic fluid*
B. synthesis of progesterone
C. education hemo placental barrier
D. hemopoiesis *

1276. The source of the placenta is
A. chorionic villi*
B. amnion and the yolk sac
C. the main deciduas*
D. the embryonic ectoderm and mesoderm extraembryonic

1277. Specify the derivatives of endoderm:
A. the epithelium of the intestinal mucosa*
B. liver epithelium
C. enamel
D. nerve cells*

1278. For the epithelium of the skin, cornea of the eye and mouth at the same time characteristic of all but
A. the development of the ectoderm*
B. relates to a multilayer*
C. refers to the stratum
D. the development of the endoderm

1279. The principles of organization of epithelia
A. border position *
B. expressed intercellular substance
C. high capacity for regeneration*
D. there are no cellcell contacts

1280. The presence of goblet cells shown in the following varieties epithelium
A. simple columnar limbic *
B. mesothelium
C. pseudostratified prismatic, ciliated*
D. stratified squamous keratinizing

1281. The next layer of the epidermis cells absent
A. basal *
B. prickly*
C. operational
D. the intermediate

1282. The transitional epithelium is a member of:
A. bladder
B. of the oral cavity*
C. pelvis
D. the small intestine*

1283. Goblet cells of the intestinal epithelium are the following types of glands:
A. the unicellular exocrine cells*
B. endoepithelial exocrine cells*
C. single cell endocrine cells
D. eczoepithelial exocrine cells

1284. Stratified squamous keratinizing epithelium occurs:
A. the anterior surface of the cornea*

B. small intestine
C. lymph nodes
D. the rectum *

1285. The form of the end section in the form of a pouch is typical for the following types of glands:
A. the sweat glands
B. the sebaceous glands*
C. of the parotid gland *
D. fundic gland

1286. The morphological classification exocrine glands taken into account:
A. form secretory department*
B. branching of secretory department*
C. form cells
D. type of secret

1287. The composition of stratified squamous epithelium of the stratumconsists of the following cells:
A. plasma cells
B. melanocytes *
C. fibroblasts
D. langerhans cells*

1288. For leukocytes characterized by:
A. they participate in phagocytosis*
B. synthesized collagen and elastin
C. actively moving *
D. are differentiated only in the bone marrow

1289. Specify the deviant the peripheral blood:
A. eosinophils – 4%
B. monocytes 11% *
C. neutrophils 60%
D. band neutrophils 10% *

1290. The classification of leukocytes is based on:
A. the content of the granules in the cytoplasm*
B. tinctorial properties *
C. the cell
D. cell motility

1291. For the lymph is characterized by:
A. is formed from interstitial fluid*
B. consists of limfoplazmy and uniform elements*
C. the main function is the transport of nutrients
D. is a product of the secretory glands

1292. The development of blood as tissues (histogenesis blood) occurs:
A. kidneys
B. the yolk sac*
C. of the thyroid gland
D. liver*

1293. Which bodies are involved in the postembryonic hematopoiesis?
A. lymph nodes*
B. liver
C. spleen
D. red bone marrow*

1294. Name the cells that can synthesize proteins of elastic fibers:
A. macrophages
B. smooth muscle *
C. mast cells
D. fibroblasts *

1295. Specify the characteristic signs of loose fibrous connective tissue unformed:
A. the monotony of cell types
B. the compact arrangement of cells
C. the abundance of intercellular substance*
D. a variety of cell types *

1296. Enter the difference of dense connective tissue of the loose connective tissue:
A. dense arrangement of collagen fibers*
B. a wide variety of cell types
C. the relatively high content of amorphous material
D. the predominance of the fibrous component of the amorphous intercellular substance *

1297. What is the difference from the loose connective tissue dense:
A. a variety of cellular composition*
B. combining the collagen fibers in bundles
C. the predominance of amorphous material on the fiber*
D. the predominance of the fibrous component of the amorphous intercellular substance

1298. Specify the location of dense connective tissue:
A. stroma of parenchymal organs
B. stromaforming organs
C. tendons *
D. of the capsule*

1299. That does not apply to the type of bone?
A. the trabecular
B. compact *
C. coarsefibered*
D. dense decorated

1300. The structure of the compact substance diaphysis includes:
A. layer osteons *
B. outside common system of records*
C. intermediate system shared plates
D. trabeculae

1301. The function metaepiphyseal cartilage plate:
A. provides the growth and regeneration of cartilage articular surfaces*
B. serves to lengthen long bones *

C. this is the place the differentiation of periosteum
D. this is the place of bone formation

1302. Osteoclasts is characterized by:
A. involved in the formation of bony plates*
B. well regenerated
C. to bone resorption *
D. secrete fibrillar proteins

1303. Cardiomyocyte all right, except for:
A. cell cylindrical form with ends branched*
B. the myofibrils consist of thin and thick filaments*
C. at the axon motor neuron anterior horn of the spinal cord forms the neuromuscular synapse
D. the kernel is not located cardiomyocyte periphery

1304. Select the cell, between which there are gap junctions:
A. cardiomyocytes*
B. myoepithelial cells
C. smooth muscle cells*
D. fibroklasts

1305. The crossstriated muscle tissue found in:
A. aperture *
B. of the esophagus*
C. arteries
D. stomach

1306. The structure of skeletal muscle fiber are:
A. myoblasts
B. myotubes
C. myosymplast *
D. miosatellitocyte*

1307. The contractile apparatus of smooth muscle cells is presented:
A. epitheliofibril
B. thick myofilaments*
C. thin myofilaments *
D. microtubules

1308. Derived neural tube:
A. of pyramidal neurons in the cerebral cortex of the brain*
B. spinal neurons psevdounipolar nodes
C. microglia
D. motor neurons of the anterior horns of the spinal cord *

1309. What is absent in the axon?
A. neyrotubuly
B. the nucleus*
C. tigroid substance*
D. neurofilament

1310. Glia:

A. includes macroglia and microglia*
B. glial cells are able to divide *
C. macroglia astrocytes and microglia up
D. are of neural origin of microglia

1311. Which cells localized in the molecular layer of the cerebellar cortex:
A. pearshaped neurons
B. granular neurons
C. pottle form cells inhibitory neurons *
D. stellate inhibitory neurons *

1312. Front formed the roots of the spinal cord:
A. axons of somatic motor neurons*
B. dendrites of sensory neurons
C. axons of autonomic neurons in the lateral horn of the spinal cord*
D. axons of sensory neurons

1313. In the formation of the blood brain barrier are involved:
A. the endothelium hemocapillars *
B. lemmocyte
C. scion astrogliocyte *
D. microglia

1314. In education, "glomeruli" cerebellum are involved:
A. the axons of neurons pear
B. cell dendrites grains *
C. fiber spread moss family*
D. the dendrites of large stellate neurons

1315. In some of the following parts of the nervous system
located parasympathetic nucleus of the autonomic nervous system?
A. cerebellar cortex
B. sacral spinal cord *
C. thoracic spinal cord
D. nucleus III, VII, IX and X cranial nerves *

1316. The cone neurosensory cells different from the rodshaped cells of the neurosensory:
A. the direction of the axon
B. the structure of the outer segment *
C. genesis
D. visual pigments *

1317. Taste buds located:
A. on the side wall circumvallate papillae*
B. on the side wall of the mushroomshaped papillae *
C. on the side wall of the filiform papillae
D. on top of the leaf buds

1318. The pigment cells in the retina are involved:
A. the supply of photoreceptor cells retinol *
B. in the phagocytosis of spent cell membranes*
C. accommodation

D. the carrying impulse

1319. The eardrum consists of:
A. stratified squamous epithelium *
B. simple squamous epithelium
C. collagen and elastin fibers *
D. elastic cartilage

1320. For conductive apparatus organ of hearing include:
A. eardrum *
B. the auditory ossicles*
C. vascular strip membranous cochlear duct
D. spiral ligament membranous cochlear duct

1321. The basilar plate membranous cochlear duct contains:
A. basal membrane *
B. the thin collagen fibers*
C. thin reticular fibers
D. vestibular membrane

1322. Ampulyar scallops vestibular department consist of:
A. to support cells *
B. of the otolith membrane
C. sensoepithelial cells*
D. tectorial membrane

1323. The sources of the heart are:
A. visceral layer of mesoderm *
B. the mesenchyme *
C. the mesenchyme and parietal mesoderm leaf
D. primary gut endoderm

1324. In the agerelated changes of the artery walls is observed:
A. the accumulation of cholesterol*
B. thickening of collagen fibers *
C. thickening elastic fibers
D. thickening of endothelial cells

1325. In the wall of the aorta is present:
A. the endothelium *
B. podendotelial layer*
C. the internal elastic membrane
D. external elastic membrane

1326. The functions of the endothelium of blood vessels:
A. athrombogenic *
B. immune
C. the barrier *
D. secretory

1327. The wall hemocapillars includes:
A. endothelial cells*

B. pericytes *
C. smooth muscle cells
D. internal elastic membrane

1328. The vessels are vessels:
A. in the arteries*
B. the veins *
C. the lymph capillaries
D. in the sinusoidal capillaries of the type

1329. Endocardium are:
A. the endothelium *
B. podendothelial layer*
C. the internal elastic membrane
D. external elastic membrane

1330. The cells of the conduction system of the heart are different from the typical cardio myocytes on several grounds:
A. lower content of myofibrils*
B. the smaller number of mitochondria*
C. lower content of glycogen
D. a high content of myofibrils

1331. Postcapillaries venules is characterized by:
A. endothelial *
B. layer podendotelial
C. pericytes *
D. smooth muscle cells

1332. What structures are part of the red pulp of the spleen?
A. venous sinuses*
B. pulp strands *
C. periarterial area
D. breeding center

1333. If accidental involution occurs in the thymus:
A. release of Blymphocytes
B. limfocyteoliz *
C. strengthening of phagocytic activity of macrophages*
D. apoptosis epitelioretikulocyte

1334. Hematopoietic activity in adults has marrow localized:
A. in the flat bones *
B. in the diaphysis of long bones
C. in the epiphysis of long bones*
D. in the metaphyses of long bones

1335. Stem cells are characterized by:
A. pluripotent *
B. a high phagocytic activity
C. the ability for selfmaintenance*
D. high differentiation

1336. When mature granulocytes occurs:
A. reduction in cell size *
B. changing the shape of the nuclei*
C. reduction of the granules in the cytoplasm
D. increased cell proliferation

1337. The cut of the bone marrow can be seen:
A. the large, thinwalled vessels – sinuses*
B. megakaryocytes *
C. cortex and medulla
D. retikuloepiteliocyte

1338. Gemokapillary red pulp of the spleen:
A. ends ellipsoidal sleeves
B. flows into the venous sinuses*
C. is combined with lymphatic capillaries
D. opens in the reticular fabric *

1339. Antigenlymphocyte differentiation takes place:
A. in the bone marrow *
B. in the thymus *
C. in the liver
D. in the peripheral lymphoid organs

1340. What structures are part of the white pulp of the spleen?
A. the lymphatic nodules*
B. venous sinuses
C. the marginal zone *
D. pulp cords

1341. The transparent shell oocyte contains:
A. glyukozoaminoglycans*
B. mucoproteids *
C. enzymes
D. epithelial cells

1342. As part of the spiral organ of Corti are:
A. receptor cells *
B. supporting cells*
C. the basal cells
D. cambial cells

1343. Vestibular membrane of the membranous labyrinth of the cochlea is composed of:
A. thin connective plate*
B. a single layer of squamous epithelium*
C. stratified epithelium
D. a gelatinous layer

1344. The bulbar conjunctiva distinguish layers:
A. stratified squamous epithelium not keratinizing*
B. lamina propria *

C. muscle plate
D. vascular plate

1345. The vitreous contains:
A. protein vitrein *
B. hyaluronic acid *
C. protein crystallin
D. glyukozoaminoglycans

1346. Adrenal medulla:
A. develops from ganglion plate*
B. contains ganglion cells *
C. comprises epithelial cells
D. function is regulated by the hormone corticotrop

1347. Primordial follicles in the ovary consists of:
A. in oocyte meiotic prophase of the first*
B. a single layer of flat epithelial cells *
C. a transparent shell
D. a connective tissue sheath

1348. In the medulla of the ovary are:
A. connective tissue
B. blood vessels
C. follicles
D. atretic body

1349. The glands of the uterus:
A. is a simple straighttube*
B. secrete mucus *
C. located in the submucosa
D. containing goblet cells

1350. Surfactant comprises:
A. phospholipids and proteins*
B. glycoproteins*
C. proteoglycans
D. chromoproteids

1351. The structure of the mitochondria are distinguished:
A. an outer membrane *
B. the inner membrane *
C. switching
D. crystals

1352. Basal body:
A. consists of nine microtubule triplets *
B. located at the base of cilia *
C. forming the cytoskeleton
D. consists of protein vimentin

1353. Unmembrane organelles include:

A. centrioles *
B. microtubules *
C. peroxisomes
D. mitochondria

1354. Microtubules:
A. are part of the cilia *
B. consist of tubulin *
C. are membrane organelles
D. contain protein myosin

1355. Types of lysosomes:
A. primary *
B. secondary *
C. osmiophil calf
D. dense bodies

1356. In mitotic telophase division occurs:
A. chromosome decondensation *
B. the formation of the nuclear envelope *
C. the disappearance of the nucleolus
D. the formation of the metaphase plate

1357. The derivatives of the ectoderm are:
A. ganglion plate *
B. placode *
C. splanhnotom
D. nefrotom

1358. Germs of the axial organ rudiments are:
A. neural tube *
B. nefrotom *
C. chorion
D. prechordal plate

1359. From the somites develop:
A. the dermis of the skin *
B. skeletal muscle tissue *
C. the epidermis
D. heart muscle tissue

1360. Provisionally human bodies include:
A. chorion *
B. the yolk sac *
C. nefrotom
D. placode

1361. When gastrulation in humans:
A. 2 processes are observed: delamination and immigration *
B. is a division embryoblast in the epiblast and hypoblast *
C. the ectoderm, mesoderm and endoderm are formed by delamination

D. at immigration forms endoderm

1362. The structure of the amniotic membrane:
A. to the formation of the wall involved extraembryonic mesoderm *
B. inner wall layer consists of the epithelium *
C. stratified squamous epithelium
D. into the stroma of the amnion has a spongy layer of dense connective tissue

1363. Locating a simple squamous epithelium:
A. the peritoneum *
B. the pleura *
C. the trachea
D. bile duct

1364. Locating a simple columnar epithelium:
A. uterus*
B. the intestines *
C. mouth
D. the total excretory duct of the parotid gland

1365. The function of epithelial tissues:
A. protection (barrier) *
B. secretory *
C. participation in the transmission of nerve impulses
D. generating the blood

1366. Indicate the correct answers in the characterization of red blood cells:
A. there are hemoglobin granules in their cytoplasm *
B. their main function is transport of oxygen *
C. the main function phagocytosis
D. is well developed Golgi complex

1367. **B- lymp**hocytes:
A. life span up to several months *
B. are transformed into plasma cells *
C. produce histamine
D. contain numerous organelles

1368. Functions of the blood basophils:
A. metabolism heparin*
B. the metabolism of histamine *
C. the reduction of vascular permeability
D. transport

1369. In the process of erythropoiesis occurs:
A. the accumulation of hemoglobin *
B. the destruction and disappearance of the nucleus *

C. segmentation of the nucleus
D. the termination of the division at the stage of basophilic erythroblasts

1370. The cells that make up the makrofagical system:
A. microglia *
B. Kupffer cells *
C. chondroblasts
D. lipocytes

1371. Tight decorated connective tissue is characterized by:
A. prevalence among fibroblasts cells *
B. an ordered arrangement of collagen fibers *
C. the presence of large amounts of adipose tissue
D. by a large number of neutrophils

1372. Reticular tissue:
A. consists of reticulocytes and reticular fibers *
B. forms the stroma of the spleen *
C. consists of a network of collagen fibers
D. is composed of collagen fibers and reticular

1373. Find the correct answers on macrophages:
A. capable of movement *
B. in the cytoplasm of numerous lysosomal *
C. in the cytoplasm of a lot of mitochondria
D. are rounded

1374. Perichondrium:
A. involved in the regeneration of cartilage *
B. consists of two layers *
C. an outer layer of loose connective tissue
D. consists of three layers

1375. Localization of elastic cartilage:
A. pinna *
B. the epiglottis *
C. the intervertebral discs
D. rib surface

1376. Types of bone cells:
A. osteocytes *
B. osteoblasts *
C. macrophages
D. fibrocytes

1377. The lamellar bone:
A. forms a compact substance of bones *
B. bony plates collagen fibers arranged in parallel *

C. between the plates are blood vessels
D. osteocytes in contact with blood vessels

1378. Development of the bone at the site of the cartilage:
A. begins with diaphysis *
B. is typical of the long bones *
C. begins with calcification of cartilage
D. under the perichondrium formed bone plates

1379. Sources of the development and regeneration of muscle tissue
A. myotome *
B. mesenchyme splanchnotome *
C. prechordal plate
D. endoderm

1380. Sarcomere:
A. limited Z lines *
B. extends in the mid line M *
C. H band contains actin filaments and myosin
D. Z Line is formed by myosin filaments

1381. Structural and functional unit of muscle tissue:
A. to the smooth muscle tissue myocyte *
B. in muscle tissue epidermal mioepiteliotcyte *
C. in skeletal muscle miosatellitotsit
D. into smooth muscle the muscle fiber

1382. Features of the contractile cardiomyocytes:
A. may branch *
B. are connected to each other forming a gusset wheel *
C. contain secretory granules
D. the kernel is located under the plasmolemma

1383. Astrocytes:
A. performing a support function *
B. participate in the formation of the blood brain barrier *
C. are rounded
D. to form a skin nerve fibers

1384. The main components encapsulated nerve endings:
A. axial cylinder *
B. capsule *
C. the myelin sheath
D. astrocytes

1385. Unmyelinated nerve fibers:
A. surrounded by oligodendrocytes *
B. contain several axons *

C. of the shell is formed by processes of astrocytes
D. the shell consists of several layers lemmocytes

1386. The types of nerve endings:
A. motor *
B. secretory *
C. encapsulated motor
D. the free movement

1387. Neurosecretory cells have the following features:
A. chromatophilic substance is mainly on the periphery of the body *
B. in the body and axons are numerous granules neurosecretion *
C. small nucleus heterochromatin
D. cells are small, multicore

1388. Astrocytes of nerve tissue:
A. forming a support apparatus CNS *
B. characterized by multiple, divergent processes in all directions *
C. cytoplasmic organelles rich in protein synthesis
D. the main function ensuring trophicity neurons

1389. Structural components of the spinal unit:
A. nerve fibers *
B. pseudounipolar neurons *
C. multipolar neurons
D. fibrous astrocytes

1390. As part of the anterior spinal roots are:
A. the axons of the neurons of the lateral intermediate nuclei *
B. axons of motor neurons *
C. the axons of the neurons of the nucleus Clark
D. dendrites of motor neurons of the anterior horns

1391. The bloodbrain barrier:
A. includes capillary endothelium *
B. astrocyte processes surrounding capillaries *
C. includes perivascular space
D. includes ependymal cells

1392. Stimulating pulses are delivered to the cells of the cerebellar Purkinje through:
A. Fiber spread Moss family*
B. lianoformis fiber spinal cerebellar path *
C. cell Golgi type 1
D. 2 type cells Golgi

1393. In the granular layer of the cerebellar cortex are distinguished:
A. cells grain *
B. stellate cells Golgi type 1 *

C. bipolar cells
D. beam cells

1394. Morphological features of the parasympathetic nervous system:
A. short postganglionic fibers *
B. disposed ganglia in organs or near *
C. includes a lateral intermediate nucleus of the spinal cord
D. short preganglionic fibers

1395. In the uvea distinguish the following layers:
A. vascular plate *
B. supravascular plate *
C. the basement membrane
D. limiting membrane

1396. The photoreceptor cells take up the following layers of the retina:
A. an outer granular *
B. outer screen *
C. nerve fiber layer
D. ganglion

1397. The lens:
A. consists of lens fiber *
B. is surrounded by a transparent capsule *
C. consists of cubic epithelial
D. develops from prechordal plate

1398. Eustachian (auditory) tube:
A. is lined with multirow ciliated epithelium *
B. on the surface of epithelial mucus *
C. has a muscle
D. has a cartilage shell

1399. The lacrimal glands:
A. formed of several groups glands *
B. at the complex structure of the alveolar tubular *
C. the secret stands in the inner corner of the eye
D. develop from the mesenchyme

1400. The structure of Corti (spiral) of the body:
A. consists of sensory and supporting cells *
B. between the inner and outer cells of the tunnel of Corti is located *
C. Corti tunnel formed phalanx cells
D. supporting cells are connective tissue

1401. In the anterior part of the pituitary gland:
A. are the most numerous cells chromophobe *
B. distinguish acidophilus and basophil cells *

C. chromophilic cells form follicles
D. thyrotropic cells contain the largest granules

1402. Specify true of the adrenal medulla:
A. endocrine cells of origin are nervous *
B. is characterized by the presence of venous sinuses *
C. dark cells secrete epinephrine
D. endocrinocytes are epithelial tissue

1403. Choose the correct answers in relation to the thyroid gland:
A. thyrocytes form follicles *
B. are parafollicular cells *
C. thyrocytes secrete calcitonin
D. thyrocytes in the wall of the follicle form the several layers

1404. Enter the correct answers in relation to the epiphysis:
A. is divided into segments *
B. endocrine cells are pinealocytes *
C. is the trabecular structure
D. pinealocytes are epithelial tissue

1405. Adrenal distinguished:
A. twostream zone *
B. glomerular area *
C. follicles
D. chromophobe zone

1406. Find the incorrect answers in relation to the adenohypophysis:
A. develops from endoderm *
B. includes a rear share *
C. includes a front share
D. contains cells chromophilic

1407. The inner shell of the aorta include:
A. endothelium*
B. basal membrane *
C. the muscular layer
D. bundles of collagen fibers

1408. Which bodies are sinusoidal capillaries of the type ?
A. red bone marrow *
B. liver *
C. kidney
D. bladder

1409. Specify the endocardial layers:
A. endothelial *
B. podendotelial *

C. cardiovascular
D. adventive

1410. Avilable elastic arteries:
A. plexus of elastic fibers instead of internal elastic membrane *
B. the predominance of elastic fibers of the muscle *
C. presence of smooth muscle cells in the outer shell
D. lack subendothelial

1411. The components of the blood thymic barrier are:
A. epitelioretikulocytes *
B. endothelium hemocapillars *
C. basophils
D. reticular cells

1412. The structure of the cortex of lymphatic node includes:
A. lymphoid follicles *
B. trabeculae *
C. marginal zone
D. venous sinuses

1413. In the white pulp of the spleen are 4 areas:
A. periarterial *
B. marginal *
C. brain
D. subcapsular sinuses

1414. The spleen is carried out:
A. the deposit of blood *
B. recycling of old red blood cells *
C. the output of blood from the central artery of the stroma
D. universal adult hematopoiesis

1415. Features of haemolymphatic nodes:
A. to sinus contains blood *
B. small lymph nodules *
C. no brain cords
D. large lymphoid nodules

1416. When reducing the caliber of the bronchi:
A. reduced the height of the epithelium *
B. decreases the number of goblet cells *
C. increases the number of goblet cells
D. increases the density of glands

1417. Airway epithelium has:
A. basal cells *

B. ciliated cells *
C. adipocytes
D. reticular cells

1418. The composition of pulmonary acinus includes:
A. respiratory bronchioles *
B. alveolar ducts *
C. terminal bronchioles
D. interlobular vein

1419. Slice of the lung:
A. begins with the terminal bronchioles *
B. contains 1218 acini *
C. it includes a branch of the pulmonary veins
D. in interlobular baffles are smooth muscle cells

1420. The layers of the epidermis "thin" skin:
A. granular *
B. basal *
C. net
D. pigmentosa

1421. The skin cells containing melanine:
A. melanocytes *
B. basal epithelial cells *
C. cells thorny layer
D. lymphocytes

1422. Find the right answers in the characteristics of sweat glands:
A. have a long excretory duct *
B. end sections are located in the deep dermis *
C. ductless epithelium stratified squamous not keratinizing
D. secretion holocrine

1423. Parotid gland:
A. according to the structure of complex branched alveolar *
B. protein has only terminal units *
C. does not have to do ductless
D. consists of mucous end sections

1424. Features of the appendix:
A. the outer layer of solid muscle membrane *
B. in the crypts few goblet cells *
C. in the crypts no Paneth cells
D. the outer layer of muscle membrane is not solid

1425. The main differences between the upper surface of the tongue from the bottom:

A. there is no submucosa *
B. There are nipples *
C. in the lamina propria are no salivary glands
D. has submucosa

1426. In the pancreas:
A. the structural and functional unit acinus *
B. endocrine cells arranged in lobules islands *
C. common duct epithelium multilayer
D. apocrine type of secretion

1427. In the mucosa of the esophagus are:
A. stratified squamous epithelium *
B. lamina propria *
C. simple columnar epithelium
D. multilayer cuboidal epithelium

1428. At the stage of enamel organ in the tooth germs are distinguished:
A. inner enamel organ cells *
B. the outer cells of the enamel organ *
C. odontoblasts
D. ameloblast

1429. Types of cells in the epithelium of the intestinal villi:
A. the limbic *
B. goblet *
C. cambial
D. parietal

1430. In some parts of the oral cavity don't have submucosa:
A. gum *
B. the hard palate *
C. the inner surface of the lips
D. cheek

1431. During the embryonic period in the esophagus are replaced by the following types of epithelium:
A. simple columnar *
B. double layer *
C. simple columnar limbic
D. transition

1432. Find the right answers in the characteristic Paneth cells:
A. are located at the bottom of the crypts of the small intestine *
B. in the apical part of the cytoplasmic granules contain acidophilus *
C. located in the epithelium of the villi
D. exist in large numbers in the colonic crypts

1433. In characteristic limbic enterocytes of the small intestine is true:
A. expressed polarity *
B. on the apical surface of brush border *
C. are intracellular tubules
D. are part of the apical secretory granules

1434. The structural features of the gums:
A. mucosa adherent to the periosteum of the jaw *
B. stratified squamous epithelium partially stratum *
C. located in the submucosa salivary gland
D. lamina propria papillae smoothed

1435. In some parts of the oral epithelium can undergo keratinization:
A. gum *
B. the hard palate *
C. the inner surface of the lips
D. hypoglossis

1436. The structure of the villi of the small intestine:
A. is covered with a singlelayered prismatic epithelium limbic *
B. the basis of the villi is loose connective tissue *
C. beneath the epithelium no basement membrane
D. network of elastic fibers surrounded by blood capillaries

1437. In the wall of the upper part of the ureter:
A. multilayer transitional epithelium *
B. outside the adventitia *
C. multirow epithelium
D. lamina propria contains glands

1438. In renal cell body contains the following:
A. podocytes*
B. endothelial cells *
C. juxtaglomerular cells
D. interstitial cells

1439. The structure of the nephron consists of:
A. renal corpuscle*
B. proximal tubule *
C. efferent arterioles
D. collecting ducts

1440. In the wall of convoluted seminiferous tubule distinguish the following layers:
A. myoid *
B. basal *
C. multirow epithelium
D. adventitia

1441. The structure of the mitochondria are distinguished:
A. an outer membrane *
B. the inner membrane *
C. nucleoid
D. vesicles

1442. Basal body:
A. serves as a template for the formation of the axoneme *
B. contains protein dynein *
C. contains microfilaments
D. comprises nine pairs of microtubules

1443. Unmembrane organelles include:
A. ribosomes *
B. microfilaments *
C. endoplasmic reticulum
D. Golgi complex

1444. Microtubules:
A. have the form of hollow cylinders *
B. forming cytoskeleton *
C. form the endoplasmic reticulum
D. provide cell motility

1445. Types of lysosomes:
A. autophagic *
B. residual calf *
C. tertiary
D. dictyosomes

1446. In mitotic telophase division occurs:
A. cytotomy *
B. appearance of nucleoli in the nuclei of the daughter cells *
C. condensation of chromosomes
D. chromosome segregation at the poles

1447. The derivatives of the ectoderm are:
A. prechordal plate *
B. neural tube *
C. somites
D. dermatome

1448. Germs of the axial organ rudiments are:
A. splanhnotom *
B. somites *
C. allantois
D. mesenchyme

1449. From the somites develop:
A. bone *
B. cartilage *
C. splanhnotom

D. nephrotom

1450. Provisionally human bodies include:
A. allantois *
B. the amniotic sac *
C. serosa
D. trophoblast

1451. When gastrulation in humans:
A. in the epiblast forms the ectoderm and mesoderm *
B. in the epiblast formed primitive streak *
C. and intussusception observed delamination
D. of the hypoblast forms the ectoderm

1452. The structure of the amniotic membrane:
A. the source of the formation of the epithelium extraembryonic ectoderm *
B. the outer wall layer consists of connective tissue with blood vessels *
C. epithelium formed from extraembryonic endoderm
D. in the inner wall layer has blood vessels

1453. Locating a simple squamous epithelium:
A. the pericardium *
B. descending part of the loop of Henle in the kidney *
C. stomach
D. the mouth

1454. Locating a simple columnar epithelium:
A. the stomach *
B. gall bladder *
C. bladder
D. esophagus

1455. The function of epithelial tissues:
A. excretory *
B. absorptive *
C. participate in immune reactions
D. contractile

1456. Indicate the correct answers in the characterization of red blood cells:
A. the diameter is 7,1 7,9 m *
B. don't have kernel*
C. contain numerous organelles
D. have a spherical shape

1457. **B- lymp**hocytes:
A. at cytolemmy have receptors *
B. provide humoral immunity *
C. contain specific granules

D. formed in the thymus

1458. Functions of the blood basophils:
A. participate in allergic reactions *
B. regulation of blood clotting *
C. increase in blood clotting
D. to provide cellular immunity

1459. In the process of erythropoiesis occurs:
A. reduction in the number of organelles *
B. a reduction in cell size *
C. increase the number of organelles
D. the color change of the oxyphilic to basophilic

1460. The cells that make up the makrofagical system:
A. osteoclasts *
B. lung macrophages *
C. plasma cells
D. lymphocytes

1461. Tight decorated connective tissue is characterized by:
A. parallel bundles of collagen fibers are separated by fibrocytes *
B. a small amount of the basic substance *
C. multiple bundles of collagen fibers are separated by fibrocytes
D. the large number of cell types

1462. Reticular tissue:
A. has a reticular structure *
B. located in the bone marrow *
C. formed by the fibroblasts and collagen fibers
D. forms the thymic stroma

1463. Find the correct answers on macrophages:
A. have different shapes *
B. expressed phagocytic activity *
C. contain specific granules
D. lobed nucleus

1464. Perichondrium:
A. in the outer layer has blood vessels *
B. the outer layer is formed by dense connective tissue executed *
C. inner layer has blood vessels
D. in the outer layer contains chondroblasts

1465. Localization of elastic cartilage:
A. the bronchi medium caliber *
B. the cartilage of the nose *
C. major bronchi

D. the joint surfaces

1466. Types of bone cells:
A. osteoclasts*
B. osteogenic cells *
C. fibroblasts
D. chondrocytes

1467. The lamellar bone:
A. in the channels are the blood vessels osteons *
B. between the bony plates located osteocytes *
C. all bone plates arranged parallel
D. between the plates are blood vessels

1468. Development of the bone at the site of the cartilage:
A. the perichondrium is rebuilt in the periosteum *
B. secondary center of ossification is produced in the pineal gland *
C. characteristic of the flat bones
D. accompanied by the formation of cartilage in the center of osteons

1469. Sources of the development and regeneration of muscle tissue
A. splanhnotom *
B. satellite cells in the skeletal muscle tissue *
C. sclerotome
D. dermatome

1470. Sarcomere:
A. contains actin and myosin filaments *
B. H band contains only myosin filaments *
C. A disk contains only the myosin filaments
D. drive consists of actin and myosin filaments

1471. Structural and functional unit of muscle tissue:
A. in the cardiac muscle cardiomyocyte *
B. in skeletal muscle the muscle fiber *
C. in the smooth muscle tissue cardiomyocyte
D. in the cardiac muscle the muscle fiber

1472. Features of the contractile cardiomyocytes:
A. myofibrils arranged in parallel *
B. mitochondria are very long *
C. have numerous lysosomes
D. most developed granular EPS

1473. Astrocytes:
A. have the form of process *
B. There are two types: fibrous and protoplasmic *
C. lining the brain ventricles

D. line the spinal canal

1474. The main components encapsulated nerve endings:
A. glial cells *
B. collagen fibers *
C. muscle fiber
D. neuron

1475. Unmyelinated nerve fibers:
A. are part of the autonomic nervous system *
B. lemmocytes core in the center *
C. comprise one axial cylinder
D. have notches in the shell

1476. The types of nerve endings:
A. encapsulated *
B. free *
C. mechanical
D. free encapsulated

1477. Neurosecretory cells have the following features:
A. the nucleus of irregular shape *
B. neurosecretion enters the blood or cerebrospinal fluid *
C. the substance is not chromatophilic
D. neurosecretion granules in the axon terminals of focus

1478. Astrocytes of nerve tissue:
A. There are two types: protoplasmic and fibrous *
B. in the cytoplasm of a small amount of EPS, free ribosomes and microtubules, many mitochondria *
C. developed in the cytoplasm of the supporting cytoskeleton
D. are only available in the gray matter of the central nervous system

1479. Structural components of the spinal unit:
A. neuroglia*
B. connective tissue stroma *
C. ependimogliya
D. stellate neurons

1480. As part of the anterior spinal roots are:
A. axons of neurons in the medial motor nucleus *
B. neurites radicular cells *
C. axons of neurons intermediate nuclei
D. beam cell axons

1481. The bloodbrain barrier:
A. of the capillary basement membrane is a continuous *
B. separating neurons from the blood and tissue fluid *

C. includes lemmocytes
D. contains macrophages

1482. Stimulating pulses are delivered to the cells of the cerebellar Purkinje through:
A. cells grain *
B. lianoformis fiber vestibular cerebellar path *
C. basket cells
D. stellate cells

1483. In the granular layer of the cerebellar cortex are distinguished:
A. fusiform cells *
B. stellate cells Golgi type 2 *
C. basket cells
D. ganglion cells

1484. Morphological features of the parasympathetic nervous system:
A. to the core centers are III, VII, IX, X and autonomic nuclei lumbosacral spinal cord *
B. long preganglionic fibers *
C. long postganglionic fibers
D. centers located in the central part of the spinal cord

1485. In the uvea distinguish the following layers:
A. the capillary vascular layer *
B. basal complex *
C. pigment layer
D. a layer of fat cells

1486. The photoreceptor cells take up the following layers of the retina:
A. a layer of rods and cones *
B. the outer boundary layer *
C. inner granular
D. internal mesh

1487. The lens:
A. lens fibers contain protein Crystalline *
B. formed epithelial tissue *
C. in the lens fibers have a core of
D. contains capillaries

1488. Eustachian (auditory) tube:
A. regulates the pressure in the middle ear *
B. connects the tympanic cavity with the nasopharynx *
C. is lined with multilayered cuboidal epithelium
D. connects the middle and inner ear

1489. The lacrimal glands:
A. by the nature of the secret serous *

B. in the composition of lysozyme has a secret *
C. on the structure of simple alveolar branched
D. the secret of a purely mucosal

1490. The structure of Corti (spiral) of the body:
A. sensory cells lie on the phalanx cells *
B. on the apical surface of the sensory cells are stereocilia *
C. sensory cells are neural tissue
D. sensory cells are located between the support

1491. In the anterior part of the pituitary gland:
A. endocrine cells form a branched strands *
B. has capillaries sinusoidal type *
C. are the most numerous cells acidophilus
D. kortikotropnye cells are located on the periphery

1492. Specify true of the adrenal medulla:
A. in addition to endocrine cells found typical neurons *
B. of developing ganglion plate *
C. function regulated by adrenocorticotropic hormone
D. bright cells secrete norepinephrine

1493. Choose the correct answers in relation to the thyroid gland:
A. into the lumen of the follicles is allocated thyroglobulin *
B. parafollicular cells produce calcitonin *
C. endocrinocytes arranged in trabeculae
D. of hormone independent of pituitary

1494. Enter the correct answers in relation to the epiphysis:
A. into the peripheral parts of the lobules are located gliocytes *
B. to produce serotonine, melatonine, antigonadotropiny *
C. pinealocytes are mostly on the periphery of the lobules
D. produces vasopressin

1495. Adrenal distinguished:
A. mesh zone *
B. medulla *
C. marginal zone
D. granular zone

1496. Find the incorrect answers in relation to the adenohypophysis:
A. operatively associated with the front part of the hypothalamus *
B. endocrine cells are of neural origin *
C. develops from the epithelium of the mouth of the bay
D. the endocrine cells of epithelial origin

1497. The inner shell of the aorta include:

A. subendothelial layer *
B. plexus of elastic fibers *
C. inner elastic membrane
D. fenestrated elastic membrane

1498. Which bodies are sinusoidal capillaries of the type ?
A. adenohypophysis *
B. adrenal medulla *
C. the small intestine
D. the thymus

1499. Specify the endocardial layers:
A. musculo elastic *
B. connective tissue *
C. the layer of striated fibers
D. elastic

1500. Avilable elastic arteries:
A. in the middle of the shell are fenestrated elastic membrane *
B. subendothelial layer found in smooth myocytes *
C. not a lot of smooth muscle cells and elastic fibers
D. a large number of collagen fiber

1501. From mesenchyme splanchnotome develop:
A. blood vessels*
B. smooth muscle tissue *
C. the connective tissue*
D. mesothelia
E. bronchial epithelium
F. cartilage

1502. The primary derivatives of the mesoderm are:
A. somites*
B. splanhnotom*
C. nefrotom*
D. the epidermis
E. placode
F. prechordal plate

1503. Extraembryonic mesoderm is involved in the development of:
A. the yolk sac*
B. chorionic*
C. amnion *
D. splanchnotome
E. trophoblast
F. the yolk sac epithelium

1504. Because of the embryonic endoderm develop:
A. gastric epithelium*
B. liver parenchyma*

C. colon epithelium*
D. kidney
E. epithelium of the oral cavity
F. adenohypophysis

1505. Allantois:
A. its epithelium is endodermal origin*
B. to its formation participates extraembryonic mesoderm *
C. acts as a gas exchange and allocation *
D. in its wall formed primary germ cells
E. involved in its formation trophoblast
F. it is derived from mesoderm epithelium

1506. Because dermal ectoderm formed:
A. the epidermis*
B. buccal *
C. tooth enamel *
D. thymic epithelium
E. stomach epithelium
F. the gut epithelium

1507. The egg man:
A. to distinguish it vegetative and animal pole*
B. contains yolk inclusions*
C. for her missing cell center *
D. has a diploid set of chromosomes
E. polyletcithal
F. therein underdeveloped granular EPS

1508. Blastula person:
A. has a cavity with fluid*
B. wall is formed trophoblast*
C. is within the cluster of cells embryoblast*
D. consists of 32 blastomeres
E. wall is formed by the blastomeres
F. is formed even after complete cleavage of the zygote

1509. Functions of amniotic membrane:
A. protects the embryo and fetus from shocks *
B. creates a certain concentration of salts in the amniotic fluid *
C. produces the amniotic fluid*
D. trophic
E. gas exchange
F. endocrine

1510. Glands with merocrine secretion type:
A. salivary*
B. sweat *
C. pancreas*
D. fundic
E. milk
F. tallow

1511. A singlelayer cubic epithelium lining:
A. collecting ducts of the kidneys*
B. bronchioles *
C. intercalated ducts of the salivary glands*
D. the gallbladder
E. striated ducts of the parotid gland
F. small intestine

1512. The multilayered epithelium not keratinizing distinguished:
A. basal layer *
B. a layer of adipositіes*
C. prickly layer *
D. cubic cells
E. endocrine cells
F. Pearshaped cells

1513. Ciliated cells in the epithelium has:
A. of the bronchi *
B. of the uterus*
C. of the fallopian tubes*
D. of the vas deferens
E. of the renal tubules
F. ducts of the salivary glands

1514. The transitional epithelium lining:
A. bladder*
B. the ureter*
C. renal calyx*
D. intestine
E. the uterus
F. the vas deferens

1515. Myoepithelial cells:
A. at the epithelial origin*
B. contain contractile filaments*
C. are Avilable in the terminal parts of the breast*
D. are found in the gastric glands
E. block secretions
F. have a spindleshaped

1516. Neutrophils:
A. their specific marker enzyme granules alkaline phosphatase*
B. the core segment has a 34*
C. allows to determine the sex of the person *
D. comprise lipid inclusions
E. synthesized immunoglobulins
F. secrete histamine

1517. The characteristic of eosinophils is true:
A. the kernel often has 2 segments *
B. in the specific granule contains histaminase*

C. is 2 5% of the total number of leukocytes *
D. account for 3540% of the total number of leukocytes
E. contained in the specific granules of histamine
F. contains basophilic granules

1518. In the specific granules of basophils contain:
A. histamine*
B. heparin *
C. histidindecarboxilaese*
D. lysozyme
E. crystalloid
F. histaminase

1519. Monocytes characterized by:
A. a large number of lysosomes*
B. output from the bloodstream into the connective tissue*
C. the implementation of phagocytosis *
D. the presence of specific granules
E. activity histaminase
F. a segmented nucleus

1520. Characteristic features of granulocytes:
A. the presence of a specific grain *
B. nuclei segmentation *
C. azurophilic granules *
D. absence of a nucleus
E. a large number of peroxisomes
F. a large number of lipid inclusions

1521. Specify the stage relating to thrombocytopoiesis:
A. megakaryocyte*
B. megakaryoblasts*
C. promegakariotsit*
D. myeloblast
E. progranulocyte
F. metamielotsit

1522. The characterization of red blood cells is true:
A. does not contain a nucleus*
B. are filled with hemoglobin *
C. conveyed gases and other substances*
D. the life expectancy is no more than one week
E. have all organelles in a small amount
F. comprise inclusion body

1523. The process of thrombocytopoiesis:
A. increases the size of the cells *
B. increases the number of pellets*
C. a significant increase in the core and segmentation*
D. reduces the number of organelles
E. reduced the size of the nucleus
F. in platelets found the remains of the core megakaryocyte

1524. Localization of dense connective tissue executed:
A. ligament *
B. the dura mater*
C. tendons *
D. thyroid capsule
E. mesh layer of the skin
F. pia

1525. The structural features of mature fibroblasts:
A. process form*
B. a large amount of granular endoplasmic reticulum*
C. a lot of mitochondria *
D. oval
E. is the most developed of the smooth EPS
F. few mitochondria

1526. Localization of dense irregular connective tissue:
A. capsule of the spleen *
B. the dermis of the skin *
C. between the rings of the trachea *
D. albuginea testis
E. tendon
F. around blood vessels

1527. The characterization of mast cells is true:
A. contain numerous granules *
B. contained in the granules, heparin, histamine *
C. pellets have a mesh, lamellar, crystalloid structure*
D. reduce the permeability of vascular wall
E. increases blood clotting
F. have the form of process

1528. Which of the cells involved in immune reactions:
A. plasma cells *
B. macrophages *
C. Tlymphocytes*
D. adipocytes
E. fibroblasts
F. fibroblasts

1529. Cells macrophafs systems are characterized by:
A. capable of completeness of phagocytosis*
B. have on their surface immunoglobulin receptors*
C. promonocytes derived from bone marrow or blood monocytes*
D. derived from granular neutrophilic leukocytes
E. they include fibroblasts, reticulocytes
F. synthesized various immunoglobulins

1530. Enter the correct answers in the characterization chondroblast:
A. synthesized components of the intercellular substance *
B. are arranged in perichondrium *

C. involved in cartilage growth apposition*
D. involved in cartilage resorption
E. have a starshaped
F. provide interstitial cartilage growth

1531. Hyaline cartilage is in:
A. laryngeal*
B. the trachea *
C. large bronchi *
D. small bronchi
E. of the diaphysis of long bones
F. the bronchioles

1532. Localization of fibrocartilage:
A. between the tendon and the hyaline cartilage*
B. intervertebral discs *
C. half drive compound (symphysis) *
D. pinna
E. the epiglottis
F. the major bronchi

1533. The structure of fibrous cartilage:
A. collagen fibers are arranged in parallel *
B. chondrocytes are arranged in a chain *
C. no perichondrium *
D. located on the periphery chondroblasts
E. is covered with perichondrium
F. collagen fibers are arranged randomly

1534. The growth of cartilage is due to:
A. chondrogenic layer perichondrium *
B. division prechondroblasts*
C. layers intercellular substance under the perichondrium *
D. division of chondrocytes such as 2
E. dividing chondrocyte3 type
F. thickening of the collagen fibers

1535. Features of osteoblasts:
A. a high activity of alkaline phosphatase*
B. well developed granular endoplasmic reticulum, mitochondria*
C. a cubic or angular form *
D. long processes
E. fusiform shape
F. contain numerous lysosomes

1536. Enter the correct characterization of osteon in:
A. between the plates are osteocytes *
B. is formed by bony plates *
C. located in the center of the channel with the blood vessels*
D. located in the peripheral portion of osteoblasts
E. between the lamellae are the blood vessels
F. in plates collagen fibers are arranged randomly

1537. Histological and anatomical types of bone:
A. leaf *
B. reticulofibrous*
C. compact *
D. fibrous
E. the trabecular
F. fibroelastic

1538. Bone tissue differs from the cartilage:
A. by the presence of blood vessels*
B. a high degree of mineralization *
C. is constantly being rebuilt *
D. absence of blood vessels
E. the presence of isogenic groups
F. fewer minerals

1539. The structure of the cortical bone:
A. consists of a periosteum fibrous outer and inner layers of the cell*
B. endosteum separates bone from bone marrow contains the osteogenic cells*
C. into the shaft of the plate has the general exterior*
D. in the diaphysis are layers of hyaline cartilage
E. formed epiphysis compact bone
F. osteocytes located in the periosteum

1540. Cancellous bone:
A. has a lamellar structure *
B. bone plates form a crossbar (trabecula)*
C. between the slats is loose connective tissue*
D. formed reticulofibroz cloth
E. contains no blood vessels
F. between the slats is cartilage

1541. Types of cardiomyocytes
A. conductive *
B. secretory *
C. contractile *
D. intercalary
E. basal
F. beam

1542. Cardiac muscle tissue
A. develops from mioepicardial plate*
B. has a cellular structure *
C. has a transverse striations*
D. has a structure simplastic
E. develops from the myotome
F. cardiomyocytes are spindleshaped

1543. Skelet muscle fiber:
A. has a noncellular structure*
B. cytolemma forms a Ttube *

C. located at the periphery of the nucleus *
D. contains a large amount of granular EPS
E. contains numerous lysosomes
F. Ttubules formed endoplasmic reticulum

1544. Features of the structure of conductive cardiomyocytes:
A. is not developed by TSystem *
B. few myofibrils *
C. mitochondria are small, are uniformly*
D. are secretory granules
E. comprise lipid inclusions
F. is well developed Tsystem

1545. In skeletal muscle fiber:
A. myofibrils are arranged in parallel, combined into bundles*
B. located between the myofibrils mitochondria chain *
C. myofibrils divided Zlines in sarcomeres *
D. located at the periphery of myofibrils
E. Ttubules are formed tubules sarcoplasmic reticulum
F. the boundaries of sarcomeres are the Mline

1546. Triad skeletal muscle fibers:
A. includes a Ttube *
B. includes two tank sarcoplasmic reticulum *
C. Ttubules cover every myofibrils *
D. Ttubules contain calcium ions
E. comprises two Ttubules
F. comprises two filaments and myosin Ttube

1547. In skeletal muscle:
A. muscle fibers are arranged in parallel *
B. with muscle fibers thin layer of loose connective tissue*
C. the muscle fibers together in bundles *
D. bundles of muscle fibers separated epimiziem
E. on the muscle fibers sensitive nerve endings are located
F. are located in the endomysium arteries and veins

1548. Characteristics of neurons:
A. size of 46 microns to 130 microns *
B. contain neurofibrils*
C. contain basophilic substance *
D. have appendages axon and dendrites
E. have appendages
F. contain numerous lysosomes

1549. Microglia
A. contain numerous lysosomes *
B. have branching processes *
C. are glial macrophages *
D. is called neyrolemmocytes
E. have appendages
F. contain a lot of peroxisomes

1550. The myelin sheath of nerve fibers:
A. formed neyrolemmocytes*
B. contains lipids *
C. forming notch *
D. is a perineurium
E. is formed by processes of astrocytes
F. in its formation involves fibrous astrocytes

1551. Types of encapsulated nerve endings:
A. tactile corpuscles*
B. VaterPacini corpuscles*
C. flask Krause *
D. Merkel cells
E. area Herring
F. Hassall's corpuscles

1552. The motor nerves:
A. formed by motor neuron axons*
B. accompanied lemmocytes*
C. end in the muscle fibers *
D. have a myelin sheath
E. are accompanied by astrocytes
F. formed dendrites

1553. Myelinated nerve fiber:
A. is covered by myelin sheath*
B. contains one axial cylinder *
C. conducts impulses at a rate of up to 120 m / s*
D. comprises a plurality of axial cylinders
E. the core is in the center lemmocyte
F. in the formation of myelin, astrocytes are involved

1554. The structure of the nerve cell dendrites:
A. a branching process *
B. the presence of substances chromatophilic*
C. significant content neyrotubul and neurofilament*
D. long unbranched appendage
E. contains numerous mitochondria
F. contains a granular EPS

1555. The characteristic ependimocytes true:
A. line the spinal canal and brain ventricles *
B. involved in the formation of CSF *
C. on the apical surface of the cilia are*
D. located under the meninges
E. included in the bloodbrain barrier
F. are involved in the formation of myelin

1556. Features of the structure of the nucleus of the neuron:
A. the core is usually one *
B. dispersed chromatin *

C. large nucleolus, a central location, "owl eye" *
D. nuclei are usually three to five
E. is sharply eccentrically
F. chromatin strongly helical

1557. Characteristics of the axon:
A. branching mostly in the terminal part *
B. the presence of agranular EPS *
C. elongated filamentous mitochondria*
D. dichotomous branching
E. the presence of substances chromatophilic
F. multiple lysosomes

1558. Chromatophilic substance in the neuron:
A. detected by staining with aniline dyes*
B. is localized in the dendrites and perikaryon*
C. basophile due to the presence of RNA *
D. detected by staining with hematoxylineosin
E. is localized in the axon, at least in the dendrites
F. include lumps in the structure of the smooth EPS

1559. Microglial cells:
A. are derived from hematopoietic stem cells *
B. elongated nucleus with compact chromatin *
C. have phagocytic activity*
D. neuroblasts originate from the neural crest
E. large eccentric nuclei, dispersed chromatin
F. have numerous long branching processes

1560. Oligodendrocytes:
A. the most numerous glial cells*
B. are involved in neuronal tropic*
C. involved in the formation of shells around nerve fibers *
D. are different from neurons lack of EPS and the Golgi complex
E. perform muscleskeletal function
F. have numerous strong branching processes

1561. For the axons of the nerve fiber is characterized by:
A. formed neuroplasm nerve cell *
B. surface is covered axolemma*
C. neurofilaments and neyrotubules oriented lengthwise *
D. in the composition of his only axolemma
E. neurofibrils and randomly oriented neyrotubules
F. mitochondria is very little

1562. Sources of the nervous system:
A. neural tube *
B. ganglion plate*
C. crest *
D. prechordal plate
E. splanhnotom
F. nefrotom

1563. Cerebellar glomeruli contain:
A. dendritic cells grain*
B. axons of Golgi cells type II*
C. the end of the mossy fibers *
D. dendrites satellite cells
E. the axons of the cells of Golgi type I
F. axons of basket cells

1564. The gray matter of the spinal cord is made up of:
A. multipolar neurons *
B. myelinated nerve fibers*
C. glial *
D. bipolar neurons
E. psevdounipolar neurons
F. pyramidal cells

1565. In the spinal cord following types of cells:
A. radicular *
B. beam *
C. internal*
D. ganglionic
E. pyramidal
F. spindle

1566. The rear horn of the spinal cord are located:
A. a gelatinous substance*
B. your own kernel *
C. the core Clark *
D. parasympathetic nucleus
E. sympathetic nucleus
F. motor nucleus

1567. The type of the smooth cortical layers are most pronounced:
A. pyramidal *
B. polymorphic*
C. ganglion *
D. the inner granular
E. pottle
F. the external granular

1568. Sheaf cells of the spinal cord are:
A. neurons own kernel*
B. neurons in the nucleus of breast *
C. neurons in the medial intermediate nucleus *
D. neurons of the lateral intermediate nucleus
E. neurons in the medial motor nucleus
F. neurons of the lateral motor nucleus

1569. The types of neurons in autonomic ganglia:
A. long axon *
B. processus*

C. associative*
D. beam
E. bipolar
F. radicular

1570. In the white matter of the spinal cord contains:
A. myelinated nerve fibers *
B. glial partitions*
C. unmyelinated nerve fibers*
D. nerve cells
E. associative cells
F. fat cells

1571. Meninxes:
A. the dura mater consists of dense connective tissue executed *
B. in the pia mater large number of blood vessels *
C. arachnoid presented loose connective tissue *
D. arachnoid contains dense connective tissue
E. dura borders with brain tissue
F. the arachnoid membrane is bordered to the brain

1572. The structure of the peripheral nerve:
A. between the nerve fibers located endoneurium*
B. forms an outer shell epineurium of the nerve trunk*
C. bundles of nerve fibers separated by perineurium*
D. collagen fibrils in the epineurium arranged circularly
E. epineurium separates the bundles of nerve fibers
F. only formed myelin nerve fibers

1573. Morphological characteristics of the sympathetic nervous system:
A. it includes the vegetative nucleus and lateral horns of breast spinal cord *
B. ganglia form the truncussympaticus*
C. short preganglionic fibers *
D. includes a nucleus of the medulla oblongata
E. ganglia are located in the internal organs
F. long preganglionic fibers

1574. Dioptric apparatus of the eyeball include:
A. cornea*
B. vitreous*
C. lens *
D. the ciliary body
E. iris
F. the choroid

1575. The organ of smell:
A. located in the olfactory region of the nasal cavity *
B. receptor cells are located between the support cells*
C. on the surface of the receptor cells are cilia *
D. receptor cells epitheliosensory
E. comprises boundary cells
F. on the apical surface of supporting cells cilia

1576. Eardrum:
A. is formed by bundles of collagen fibers *
B. the outside is covered by stratified squamous epithelium of the stratum*
C. the inner surface is lined with a single layer of squamous epithelium *
D. from the outside is covered with a single layer of squamous epithelium
E. collagen fibers are arranged randomly
F. is the basis of the muscleelastic fabric

1577. The tunnel ofCorti:
A. formed columnar supporting cells *
B. separates the outer and inner group of cells*
C. pass through it dendrites spiral ganglion neurons*
D. contains loose connective tissue
E. formed phalanx cells
F. formed hair cells

1578. Varieties of the organ of Corti supporting cells:
A. columnar *
B. metacarpophalangeal*
C. cells Claudius *
D. flaskshaped
E. intercalary
F. hair

1579. The transparency of the cornea caused by:
A. a special arrangement of collagen fibers*
B. the lack of blood vessels in their own substance *
C. a lot of glycosaminoglycans in an amorphous substance *
D. presence of a large amount of glucuronic acid
E. cells in the absence of its own substance
F. increased permeability

1580. The structure of the sclera:
A. is formed by dense connective tissue executed *
B. is covered by the conjunctiva *
C. at the interface with the cornea attaching venous sinus*
D. is covered with a single layer of squamous epithelium
E. is formed by loose connective tissue
F. bundles of collagen fibers are moving in the iris

1581. The structure of the olfactory cells right:
A. is a neurosensory*
B. in the distal portion of the peripheral process has expansion – mace*
C. on the surface of the clubs are cilia *
D. are epitheliosensory
E. granular EPS located in the basal part of the cell
F. supporting cells are the connective tissue

1582. The structural features of the macula organ of equilibrium:
A. consists of a receptor and supporting cells*
B. receptor cells are epitheliosensory*

C. the surface of the macula covered otolith membrane*
D. sensory cells lie at the surface of the support
E. receptor cells are neurosensory
F. on the surface of the supporting cells are cilia

1583. In the intermediate pituitary:
A. endocrinocytes arranged as strands *
B. are melanotropnye cells *
C. produced lipotropic hormone *
D. are pituitary cells
E. hormones accumulate in the follicles
F. end axons of neurosecretory cells

1584. Enter the correct answers about the structure of the posterior pituitary:
A. contains the axons of neurosecretory cells of the hypothalamus*
B. comprises glial cells *
C. are cumulative calf Herring *
D. endocrine cells form cords
E. endocrine cells form follicles
F. parenchyma up neuroendocrine cells

1585. Cells beam and reticular zones of the adrenal gland are characterized by:
A. numerous lipid inclusions *
B. mitochondria with vesicular cristae*
C. agranular EPS *
D. a large number of lysosomes
E. mitochondria with lamellar cristae
F. intracellular tubules

1586. In hyperthyroidism:
A. forms a wall of the follicle folds*
B. in the colloid follicle vacuoles appear*
C. thyrocytes high prismatic *
D. thyrocytes flatten
E. colloid in follicles compacted
F. reduces the number of microvilli thyrocyte

1587. Gonadotropic cells of the pituitary gland influence:
A. ovogenesis*
B. spermatogenesis*
C. the sex hormones*
D. adrenal cortex
E. thyroid function
F. the adrenal medulla

1588. In case of insufficient production of thyroid hormones:
A. increases the production of thyrotropin*
B. vacuolating cytoplasm tireotropocytes*
C. observed hypertrophy tireotropocytes*
D. is an accumulation of oxytocin in the posterior pituitary
E. increases the height thyrocyte
F. accumulate lipid droplets in thyrocytes

1589. The structural features of the main endocrine parathyroid:
A. basophilic cytoplasm *
B. a lot of free ribosomes and policy*
C. are secretory granules *
D. is weakly developed granular endoplasmic reticulum
E. oxyphilic cytoplasm
F. few mitochondria

1590. Find the right answers on the mesh zone of the adrenal cortex:
A. endocrinocytes form a network*
B. less lipid inclusions as compared with the beam area*
C. into endocrine cells vacuolar EPS *
D. its function is regulated by the gonadotropic cells
E. endocrinocytes form glomeruli
F. in the mitochondria cristae plate endocrinocytes

1591. In the development of the adrenal glands are involved:
A. splanhnotom*
B. coelomic epithelium *
C. ganglion plate *
D. nefrotom
E. placode
F. somites

1592. Adrenal cortex:
A. develops from splanchnotome*
B. is subdivided into three zones *
C. contains a layer of undifferentiated cells*
D. produces a protein hormones
E. endocrine cells are neural tissue
F. the regulation does not depend on the pituitary

1593. Veins amyous type include:
A. retinal vein *
B. veins bones *
C. veins of the pia mater*
D. femoral
E. superior vena
F. subclavian

1594. Variations cells cardiac conduction system:
A. pacemakers *
B. cells bundle branch block*
C. cells Purkinje fibers *
D. intercalary
E. secretory
F. typical of cardiomyocytes

1595. In the wall of blood capillaries are:
A. endothelial cells *
B. pericytes*

C. the basal membrane *
D. the internal elastic membrane
E. smooth muscle cells
F. layer podendotelial

1596. Avilable wall arterioles:
A. there is a smooth muscle layer 12 in the middle shell *
B. endothelial cells and myocytes in contact with each other*
C. has an internal elastic membrane *
D. attaching the outer elastic membrane
E. are fenestrated elastic membrane
F. no sub endothelial

1597. By decreasing the caliber of the arteries:
A. reduces the thickness of the tunica*
B. disappears outer elastic membrane *
C. reduced the number of layers of smooth muscle cells*
D. increases the number of collagen fibers
E. increases the number of elastic fibers
F. internal and external elastic membrane reserved

1598. Veins with weak development of muscular elements include:
A. neck veins *
B. superior vena*
C. facial *
D. femoral
E. inferior vena
F. shoulder

1599. Features of conducting cells of the heart:
A. little myofibrils*
B. is not developed by TSystem *
C. a lot of glycogen *
D. well developed TSystem
E. a lot of lysosomes
F. myofibrils arranged in the center of the cell

1600. Conductive heart cells are located:
A. under the endocardium*
B. in the thickness of the myocardium*
C. in papillary muscles *
D. pericardial
E. between the myocardium and the epicardium
F. valves

1601. Avilable thoracic duct:
A. wall at the level of the most developed diaphragm*
B. the inner lining of the small and medium *
C. on the border of the inner and middle membranes site has elastic plexus* fiber
D. the thickness of the muscle layers increases in the distal direction
E. no valves
F. is the most developed in the wall of the distal part

1602. Tdependent areas are located:
A. to paracortical zone of lymph nodes *
B. in the area of the spleen periarterial*
C. between the follicles of Peyer's patch*
D. in the mantle zone of the white pulp of the spleen
E. strands in brain lymph node
F. in a breeding center spleens

1603. The micro environment of T and B lymphocytes in the lymphoid organs comprise:
A. macrophages *
B. interdigitir cells*
C. dendritic cells *
D. basophils
E. erythrocytes
F. plasmocytes

1604. Differences from the medulla of the thymus cortical:
A. contains less lymphocytes *
B. in acinar epithelial cells contained vacuoles *
C. contains layered calf *
D. has the reticular stroma
E. the presence of trabecular
F. are brain bands

1605. In the center of reproduction of lymphoid follicles lymph nodes are:
A. lymphoblasts*
B. macrophages *
C. dendritic cells *
D. tissue basophils
E. fibroblasts
F. neutrophils

1606. Variations of T lymphocytes:
A. Tkiller *
B. T helper *
C. Tsuppressors*
D. plasma cells
E. macrophages
F. the suppressor

1607. The lymphatic nodules of the spleen differ from those in lymph nodes:
A. the presence of the central artery *
B. the smaller size *
C. the presence of the Tzone *
D. the presence of germinal center
E. presence of reticular cells
F. the presence of macrophages

1608. Strands of brain lymph node:
A. produced plasma cells *
B. are blood vessels *

C. are macrophages *
D. located germinal center
E. is a Tzone
F. arranged periarterial vagina

1609. Features of the venous sinus of the spleen:
A. discontinuous basal membrane *
B. the absence of pericytes*
C. the presence of circular reticular fibers in the wall*
D. has circular elastic fibers
E. has an internal elastic membrane
F. the presence of a longitudinal muscle layer

1610. The stroma of the spleen are:
A. capsule *
B. trabeculae*
C. reticulum *
D. pulp cords
E. periarterial vagina
F. lymphoid nodules

1611. Tdependent zone of the spleen:
A. located around the central artery *
B. it consists mainly of T lymphocytes *
C. contains interdigitir cells *
D. composed mainly of Tlymphoblasts
E. contains plasma cells
F. located in the red pulp

1612. At age involution of the thymus:
A. reduces the number of lymphocytes *
B. increases the amount of adipose tissue *
C. grows connective tissue *
D. is more noticeable boundary between the cortex and medulla
E. is growing epithelial tissue
F. increased the number of lymphocytes

1613. In the wall of the pulmonary alveoli are:
A. macrophages *
B. alveolocytes type I *
C. alveolocytes type II *
D. plasma cells
E. tissue basophils
F. ciliated cells

1614. Pulmonary bronchial mucosa are:
A. multirow ciliated epithelium*
B. lamina propria*
C. muscle plate *
D. muscleelastic layer
E. muscle sheath
F. fibrous layer

1615. Protein mucous glands in the wall are:
A. trachea*
B. bronchi caliber *
C. of the bronchi medium caliber*
D. respiratory bronchioles
E. terminal bronchioles
F. small bronchi

1616. The characteristics of small caliber bronchial wall:
A. developed muscular plate *
B. the lack of cartilage*
C. absence of iron*
D. the presence of cartilage islands
E. multirow epithelium
F. duallayer epithelium

1617. The glands of the respiratory tract:
A. located in the submucosa*
B. are proteinmucous *
C. complex alveolartubular*
D. mucous
E. simple tubular
F. simple alveolartubular

1618. In the epithelium cells of the bronchial tubes are the following:
A. ciliated *
B. not limbic *
C. secretory *
D. pneumocytes type 1
E. plasma cells
F. macrophages

1619. The differences in the structure of the bronchi medium caliber of the large:
A. reduction in the thickness of the mucous membrane *
B. the presence of elastic cartilage islands *
C. reducing the height of the epithelial layer *
D. absence of cartilage
E. becomes a singlelayer cubic epithelium
F. increase in the number of goblet cells

1620. Avilablealveolocytes type 2:
A. developed agranular EPS *
B. the presence in the cytoplasm of cells osmiophil*
C. large mitochondria *
D. well developed granular EPS
E. much the peroxisomes
F. are oxyphilic pellets

1621. The main components of the surfactant:
A. phospholipids *
B. proteins *

C. glycoproteins *
D. glycogen
E. lipoproteins
F. carbohydrates

1622. In the epithelium of the nasal cavity are following cells:
A. ciliated *
B. microvilli*
C. goblet *
D. columnar
E. brush
F. Clara cell secretory

1623. Outlet ducts of sweat glands:
A. lined with twolayer cubic epithelium *
B. have a tortuous course *
C. opening on the skin surface *
D. are lined with a single layer of cuboidal epithelium
E. short, straight
F. are lined with a multilayered epithelium not keratinizing

1624. Sweat glands:
A. apocrine merocrine*
B. simple tubular linear *
C. secretory end section located in the reticular layer *
D. only merocrine
E. simple alveolar branched
F. simple branched tubular

1625. Thorny layer of the epidermis:
A. cells are polygonal shape *
B. connected to the desmosomes the cells *
C. meet macrophages *
D. cells containing keratohyalin
E. between the cells are close contacts
F. are present granular leukocytes

1626. Papillary dermis:
A. consists of loose connective tissue *
B. contains Meissner corpuscles*
C. defines the pattern of the skin of the fingers *
D. contains VaterPacini corpuscles
E. comprises end sections of sweat glands
F. is formed by dense connective tissue executed

1627. The root of the hair include:
A. cortex *
B. medulla *
C. cuticle *
D. dermal sheath
E. pin
F. muscle fibers

1628. Actinic at the root of the hair is observed in:
A. the cortex *
B. the cuticle*
C. medulla *
D. the outer root sheath
E. basal layer
F. hair bag

1629. The apocrine sweat glands are:
A. to the forehead*
B. in the armpit *
C. into the anus *
D. in the skin of palms
E. into the skin of the back
F. in the skin of the abdomen

1630. In the process of keratinization of the epidermis are involved:
A. epitheliofibril*
B. keratohyalin*
C. keratinosoms*
D. cells thorny layer
E. mitochondria
F. macrophages

1631. The types of cells fundic glands of the stomach:
A. parietal *
B. the main *
C. mucous *
D. the limbic
E. basal
F. goblet

1632. In education, the villi of the small intestine are involved:
A. singlelayer epithelium limbic *
B. lamina propria*
C. smooth muscle cells from the plate *
D. submucosa
E. muscle sheath
F. heavy connective tissue

1633. Features of the submandibular gland of parotid:
A. the presence of mixedend department*
B. a branched striated ducts *
C. poorly developed intercalary ducts *
D. greater interlobular ducts
E. short straight striated ducts
F. the presence of mucous end sections

1634. Avilable sublingual gland:
A. contains protein, mucous and mixed end section *
B. very short striated ducts *

C. wide interlobular septum *
D. dominated the protein end section
E. no protein crescents
F. in the interlobular ducts of a singlelayer cubic epithelium

1635. Proper cancer of the esophagus:
A. located in the submucosa *
B. complicated tubular alveolar branched *
C. in the end sections predominant mucosal cells *
D. predominate protein cells
E. located in the lamina propria
F. located mainly in the transition area in the stomach

1636. The structural features of the fundus of the stomach:
A. asimple tubular gland long unbranched *
B. in the major glands predominate and parietal cells *
C. slight gastric pits *
D. in the gland mucous cells predominate
E. in cells of the endocrine glands have
F. astric pit depth

1637. The cells in the crypt epithelium composed colon:
A. the limbic *
B. goblet*
C. endocrine *
D. ciliate
E. parietal
F. ensheathing

1638. Select the endocrine cells of the stomach:
A. D *
B. A*
C. G *
D. N
E. S
F. I

1639. In the mature tooth distinguish the following parts:
A. enamel*
B. cement *
C. dentin *
D. dental bag
E. braces
F. enamel organ

1640. The body of the tooth enamel are distinguished:
A. an inner layer *
B. interlayer*
C. an outer layer*
D. granular layer
E. mesenchymal layer
F. basal layer

1641. In the ileum, unlike skinny:
A. short villi *
B. larger lymphoid follicles *
C. over goblet cells *
D. higher villi
E. less goblet cells
F. is more pronounced muscle plate

1642. Features in the structure of the wall of the colon:
A. in the epithelium of the crypts are many goblet cells *
B. there is no lint *
C. in the submucosa numerous lymphoid follicles *
D. in the crypts is dominated by the limbic cells
E. singlelayer cubic epithelium
F. in a large number of crypts Paneth cells

1643. Dentin in a tooth is:
A. at the border of the enamel dentin *
B. at the boundary of the dentine with cement *
C. between dentin and odontoblasts*
D. around the dentinal tubules
E. enamel
F. in the periodontium

1644. Features of blood circulation in the liver:
A. in the mixed blood hemocapillars*
B. to the liver include hepatic artery and portal vienna*
C. hepatic vein branches are not accompanied arteries*
D. in the liver include hepatic artery and hepatic vienna
E. in the center of the slices passes central artery
F. blood in the liver lobule flows from the center to the periphery

1645. Pancreatic acinus:
A. consists of 812 cell *
B. in the apical secretory granules of the atsinocytes*
C. in the center of acinar cells visible centroatsinoz*
D. atsinocytes secrete apocrine for type
E. secretory granules in the basal part atsinocytes
F. in the center of the acinar cells located atsinoinsular

1646. In the lobules of the pancreas are distinguished:
A. intercalated ducts*
B. mezatsinozducts *
C. endocrine islets *
D. striated ducts
E. intermediate ducts
F. alveolar ducts

1647. In the pyloric glands of the stomach:
A. is dominated by the mucous cells *
B. branched end section *

C. no major cell *
D. are Paneth cells
E. has three kinds of endocrine cells
F. straight end section

1648. Features threadlike papillae language:
A. draw out *
B. the epithelium undergoes keratinization *
C. no taste buds *
D. there is no secondary papillae
E. in the epithelium, taste buds are
F. are on the lower surface of the tongue

1649. Peyer's patches:
A. located in the ileum *
B. found in the duodenum *
C. occupy mucosa and submucosa *
D. are found in the colon
E. is the accumulation of granular leukocytes
F. located between intestinal crypts

1650. Features of the esophageal mucosa, unlike other sections:
A. a multilayer epithelium not keratinizing *
B. cardiac glands located in the lamina propria of two groups*
C. in the upper part of the esophagus muscle in the plate only longitudinalsmooth muscle bundles *
D. pseudo stratified epithelium
E. in the laminapropria of the gland has its own
F. in the muscle plate three layers of muscle cells

1651. Lymphoid follicles in the intestines are in:
A. the lamina propria*
B. submucosa *
C. between the crypts *
D. crypts
E. villi
F. between the layers of the muscle membrane

1652. Pharyngeal tonsil:
A. is located in the lamina propria of the posterior wall of the nasopharynx*
B. surface epithelium forms folds *
C. epithelium in some places multirowed*
D. located in the lamina propria of the larynx
E. its crypt deep and branched
F. lymphocytes diffusely located, do not form follicles

1653. The end sections of mixed salivary gland cells have the following:
A. mucous *
B. protein*
C. myoepithelial*
D. goblet
E. cambial
F. intercalated

1654. Features of the structure of the esophageal wall:
A. the mucosa is lined by stratified squamous epithelium not keratinizing *
B. in the muscular layer has striated muscle tissue*
C. in the submucosa has its own cancer *
D. in the submucosa located cardiac cancer
E. outer sheath serous
F. cavity is lined with multirow epithelium

1655. Mushroom buds:
A. are located among the filiformpapillae *
B. blood capillaries are located very close to the epithelium *
C. stratified squamous epithelium not keratinizing *
D. the most numerous of all types of papillae
E. epithelium partially stratum
F. are located in the root of the tongue

1656. The differences in the structure of the pyloric part of the stomach fromfundus:
A. deep pit *
B. short branched gland *
C. thick muscular coat*
D. long branched gland
E. in the gland cells is dominated by the main
F. in the muscular layer of the inner layer disappears

1657. Features of gastric parietal cells:
A. numerous mitochondria *
B. the presence of intracellular tubules *
C. microvilli on the apical surfacee*
D. most developed granular EPS and Golgi complex
E. multiple lysosomes
F. secretory granules in the apical part

1658. In the development of the digestive system are involved:
A. the ectoderm *
B. endoderm*
C. visceral piece splanchnotome*
D. nephrotom
E. somites
F. mezonephral channel

1659. Types of epithelium found in major salivary glands:
A. singlelayer cubic*
B. simple columnar *
C. layered cubic *
D. multirow
E. doublerow
F. transition

1660. In the wall of the digestive tract are:
A. submucosalplexus *
B. intermuscularplexus *

C. subserousplexus *
D. subepithelial plexus
E. plexus in the lamina propria
F. plexus in the intestinal villi

1661. Find the wrong answers on the structure of the hard palate:
A. a multilayered epithelium not keratinizing*
B. there submucosa *
C. are located in the lamina propria of the salivary glands *
D. between the lamina propria and the periosteum has a layer of fatty tissue
E. under the mucous membrane in the back of there are salivary glands
F. stratified squamous epithelium partially stratum

1662. Avilable front (oropharyngeal) of the soft palate:
A. stratified squamous epithelium not keratinizing *
B. there submucosa *
C. in the submucosa located salivary glands *
D. located in the lamina propria of the salivary glands
E. epithelium partially layered stratum
F. nosubmucosal

1663. Find the right answers on the structure of the front part of the soft palate:
A. between the lamina propria and submucosa welldeveloped layer of elastic fibers*
B. there is no muscle plate *
C. of the tongue base is striated muscle tissue *
D. in the tongue no salivary glands
E. has a muscular plate
F. salivary glands are located in the lamina propria

1664. Avilable circumvallate tongue papillae:
A. have a narrow base and wider upper part of the *
B. the surface of the nipple does not protrude above the surface of the mucous membrane*
C. contain a large number of taste buds*
D. in the grooves open mucous salivary glands
E. located throughout the tongue
F. in the grooves do not come ducts glands

1665. The muscles of the tongue:
A. bundles of muscle fibers are arranged in three directions *
B. connective tissue is divided by a partition into two halves *
C. between bundles of muscle fibers located salivary glands *
D. bundles of muscle fibers are arranged in two directions
E. are the salivary glands just in front of the tongue
F. on the bottom surface of the tongue muscle adherent to the mucosa

1666. What is the correct answer in relation to the lingual tonsils:
A. located in the root of the tongue *
B. in the crypt epithelium stratified squamous not keratinizing *
C. in the crypt open ducts of the salivary glands *
D. located on the back of the tongue
E. epithelium in the crypts of pseudostratified ciliated
F. in the crypt is not out ducts of the salivary glands

1667. In the gastric mucosa has the following formation:
A. folds*
B. pits *
C. cancer *
D. crypt
E. plexus of Auerbach
F. grouped lymphoid follicles

1668. The characterization of the crypt of the small intestine is true:
A. is the deepening of the epithelium in the lamina propria*
B. on the bottom of the Paneth cells are located *
C. the limbic and goblet cells less differentiated than villi *
D. goblet cells predominate
E. no Paneth cells
F. have a clearance

1669. The endocrine part of the pancreas:
A. represented by the islands *
B. is the greatest number of islets in the aft *
C. between the endocrine cells of the blood capillaries are located *
D. cells make up most of the Dcells
E. endocrinocytes located between acini of strands
F. the blood capillaries located around the islands

1670. The distal tubule epithelium differs from kidney proximal:
A. lack brush border *
B. the smaller size of the cells *
C. is more pronounced basal striations *
D. absence of basal striation
E. a small number of mitochondria
F. the accumulation of mitochondria in the apical part of the cell

1671. The structure of the kidney filtration barrier consists of:
A. the capillary endothelium *
B. threelayered basal membrane *
C. podocytes*
D. mezangiocytes
E. macrophages
F. the membrane bilayer

1672. Endocrine apparatus of the kidney include:
A. interstitial cells *
B. juxtaglomerular cell *
C. jukstavascular cells *
D. proximal tubular cells
E. dark cells collecting tubules
F. podocytes

1673. From mezonephral duct develop:
A. ureter *
B. collecting tubes *

C. renal calyx*
D. proximal tubules
E. distal tubules
F. renal corpuscle

1674. Renal corpuscles:
A. shows the capillary network *
B. with a threelayer endothelium and podocytes basement membrane *
C. the inner layer of the capsule is formed by podocytes*
D. capillaries are surrounded by smooth muscle cells
E. mesangial cells are surrounded by podocytes
F. hemocapillars type 1

1675. Differences from cortical nephrons juxtamedullary:
A. the longer loop *
B. of the same diameter afferent and efferent arterioles *
C. loops are located in the medulla *
D. a higher pressure in the capillaries
E. in the distal tubule epithelium limbic
F. the epithelium of the glomerular capsule single layer limbic

1676. The transitional epithelium lined:
A. kidney calyx *
B. pelvis *
C. the ureter *
D. collecting tubes
E. papillary channels
F. proximal tubules

1677. Biologically active substances produced in the kidney:
A. an erythropoietin *
B. prostaglandins *
C. prostacyclin *
D. vasopressin
E. oxytocin
F. somatostatin

1678. In the medulla of kidney located:
A. collecting tubes *
B. loop juxtamedullary nephrons*
C. papillary channels *
D. renal corpuscles
E. brain rays
F. proximal tubules

1679. The epithelium of collecting tubules:
A. singlelayer cubic *
B. in the composition of its light and dark cells *
C. in the dark cells have intracellular canaliculi*
D. contains macrophages
E. transition
F. singlelayer cubic limbic

1680. Features of the structure of the bladder:
A. is lined with transitional epithelium*
B. in front of the bottom offline submucosa *
C. into the bottom of the field located in the lamina propria of the gland *
D. is lined with multirow epithelium
E. in the muscular layer of the inner layer of circular
F. in the muscular layer of the two layers

1681. The interstitial cells in the kidney:
A. have the processes*
B. are arranged between the capillary and the loop of Henle *
C. produce prostaglandins *
D. located in the cortex
E. produce renin
F. contain numerous lysosomes

1682. General characteristics of nephrons:
A. distinguish cortical nephrons and juxtamedullary*
B. cortical nephrons provide uropoiesis*
C. juxtamedullary nephrons have a long thin part of the loop *
D. juxtamedullary nephrons are actively involved in uropoiesis
E. of the glomeruli located in the medulla
F. all the loops are the nephrons in the cortex

1683. What types of epithelium found in the kidney:
A. singlelayer cubic *
B. simple columnar *
C. singlelayer flat *
D. stratified squamous not keratinizing
E. multirow
F. duallayer cubic

1684. Cells "tight spots" in the kidney:
A. located in the wall of the distal tubule *
B. are sodium receptors *
C. are epithelial cells *
D. contain secretory granules
E. produce renin
F. arranged in the wall of the collecting tube

1685. The structure of the vas deferens is true:
A. multirow epithelium*
B. three layers of muscle in the shell *
C. mucosa forms longitudinal folds*
D. stratified squamous epithelium not keratinizing
E. has submucosa
F. the two layers in the muscle membrane

1686. The flow of the epididymis:
A. doublerow epithelium *
B. in the wall of the circular smooth muscle layer *

C. on the surface of the epithelium are stereocilia*
D. doublerow ciliated epithelium
E. has the submucosa
F. has a twolayered tunica muscularis

1687. In the wall of the vas deferens are following layers:
A. multirow epithelium *
B. lamina propria*
C. the muscle sheath *
D. muscle plate
E. serosa
F. submucosa

1688. The vas deferens:
A. has a highly developed muscular coat *
B. is lined with multirow epithelium *
C. connected to the seminal vesicles *
D. is lined with transitional epithelium
E. is covered with serous membrane
F. has a twolayered tunica muscularis

1689. Seminiferous tubules:
A. simple columnar epithelium *
B. in the epithelium of secretory cells are cubic*
C. contains a circular muscle fiber layer *
D. in the middle layer of longitudinal muscle fibers
E. outside the serosa
F. simple squamous epithelium

1690. In the prostate gland:
A. three groups gland located around the urethra *
B. with glands muscleconnective tissue layer *
C. ducts glands open into the urethra *
D. endocrine largest group
E. outer gland smallest
F. end section formed by endocrine cells

1691. The composition of the bloodtestis barrier include:
A. sustentocytes*
B. endothelial basement membrane *
C. capillary endothelium *
D. muscular coat
E. adventitia
F. the interstitial cells

1692. The sources of the male reproductive system:
A. nephrotom*
B. mezonephral flow *
C. urogenital sinus *
D. paramezonephral duct
E. splanhnotom
F. endoderm

1693. From mezonephral duct develop:
A. an appendage of the testis*
B. vas deferens *
C. the seminal vesicles *
D. the urethra
E. the prostate gland
F. bladder

1694. Avilableglandulocytes testicles:
A. numerous lipid inclusions *
B. mitochondria with tubular and vesicular cristae *
C. is well developed agranular EPS *
D. mitochondria with lamellar cristae
E. multiple lysosomes
F. many free ribosomes

1695. In the process of spermatogenesis occurs:
A. a first division of meiosis spermatocytes undergo 1st order *
B. spermatids are formed after the second meiotic division *
C. maturation step completes formation of spermatids *
D. on the stage of forming the image of spermatids
E. ripening stage is completed the formation of spermatocytes 2nd order
F. spermatogonia divide by meiosis

1696. Find 3 incorrect answers in the structure of the Fallopian tubes:
A. simple columnar epithelium limbic *
B. three layers of muscle in the shell *
C. outer shell adventitia *
D. outer shell serous
E. the mucous membrane forms large folds
F. the two layers in the muscle membrane

1697. Breast:
A. apocrine secretion *
B. complex branched alveolar *
C. secretory units formed laktocytes*
D. imple alveolar branched
E. develops from the endoderm and mesenchyme
F. secretion merocrine

1698. Uterine cancer:
A. is asimple tubular *
B. located in the endometrium *
C. into their mouth are ciliated cells *
D. located in the muscular layer
E. containing goblet cells
F. complex alveolar branched

1699. The structure of the wall of the uterus:
A. simple columnar epithelium *
B. three layers of muscle membrane *

C. into the lamina propria situated cancer *
D. in the muscular layer of the two layers
E. outside adventitia
F. glands located in the submucosa

1700. In the wall of the fallopian tubes are distinguished:
A. mucosa*
B. muscle membrane*
C. serosa *
D. muscle plate
E. adventitia
F. submucosa

1701. When the follicle atresia:
A. oocyte dies *
B. interstitial cells hypertrophy *
C. transparent shell shrinks *
D. is the radiant crown
E. follicular cells proliferate
F. transparent shell disappears

1702. In the medulla of the ovary are located:
A. blood vessels *
B. epithelial cords *
C. the connective tissue *
D. atretic body
E. tertiary follicles
F. primordial follicles

1703. Fallopian tubes:
A. develop from paramezonephral ducts *
B. are lined with a singlelayered prismatic epithelium *
C. in a ciliated epithelium and glandular cells *
D. twolayer cubic epithelium
E. into the muscular layer of the three layer
F. surrounded adventitia

1704. Features of the endometrium in the menstrual cycle period:
A. glands become tortuouss*
B. artery spiralization*
C. are filled with cancer secret *
D. prostate short, not secrete
E. artery straight
F. veins spiralization

1705. The end section of the breast:
A. have the shape of the alveoli *
B. formed laktocytes*
C. secreted by apocrine type *
D. formed by flat epithelial cells
E. between laktocytes are myoepithelial cells
F. the secretion of type merocrine

1706. Myometrium:
A. consists of three layers *
B. on the border of the inner layer of lamina propria*
C. middle layer contains large vessels *
D. consists of two layers
E. outer layer of circular
F. in the inner layer large vessels

1707. The cervix:
A. is covered by stratified squamous epithelium *
B. the cervical canal is lined with a singlelayered prismatic epithelium *
C. into the mucosa of the numerous glands *
D. channel monolayer squamous epithelium
E. is covered with tworow ciliated epithelium
F. no mucosal glands

1708. Features of the lactating mammary gland:
A. extended end section *
B. open milk sinuses *
C. into numerous lobules alveoli *
D. the small size of the alveoli
E. closed milk sinuses
F. wide interlobular septa

1709. In nonlactating mammary gland:
A. to the lobules dominated ducts *
B. alveolar ducts are closed *
C. interlobular septum wide *
D. is not developed ducts
E. milk sinuses wide
F. interlobular septum narrow

1710. In normal blood granulocytes following species:
A. stab *
B. metamyelocytes*
C. segmented *
D. promyelocytes
E. myelocytes
F. myeloblasts

1711. Which of these cells migrate from the blood into the connective tissue?
A. lymphocytes*
B. neutrophils *
C. monocytes *
D. fibroblasts
E. adipocytes
F. fibroblasts

1712. These cells synthesizing collagen:
A. fibroblasts*
B. chondroblasts*

C. osteoblasts *
D. macrophages
E. plasma cells
F. adipocytes

1713. Coarse fiber bone:
A. contains a thick bundles of collagen fibers *
B. in adults is stored on the site of the cranial sutures *
C. contains many proteoglycans *
D. collagen fibers are arranged parallel
E. contains little osteocytes
F. forms a spongy bone

1714. Diaphysis of long bones:
A. is covered with periosteum*
B. osteons it arranged longitudinally *
C. endosteum lines the cavity of the bone marrow *
D. consists of coarsefibered bone
E. formed spongy bone
F. the cavity of the diaphysis is always filled with red bone marrow

1715. Smooth muscle:
A. is a nonarbitrary*
B. forms a hollow shell of muscle *
C. capable of regeneration *
D. is controlled by the somatic nervous system
E. it does not depend on reducing the impact of hormones
F. actomyosin complexes have a regular arrangement

1716. Morphological variety of neurons:
A. multipolar *
B. prevdounipolar*
C. bipolar *
D. receptor
E. radicular
F. afferent

1717. Variety of neuroglial cells:
A. oligodendrogliocytes*
B. ependimocytes*
C. astrocytes *
D. ganglionic
E. neuroblasts
F. fibroblasts

1718. Psevdounipolar neurons:
A. is a kind of bipolar neurons *
B. are afferent *
C. Tshaped appendages divided *
D. occur in autonomic ganglia
E. are efferent
F. modified multipolar neurons

1719. The structure of the synapses are distinguished:
A. presynaptic membrane*
B. postsynaptic membrane *
C. the synaptic cleft *
D. tonofilaments
E. postsynaptic vesicles
F. colloid

1720. The dendrites of Purkinje cells in the molecular layer of thecerebellum synapse:
A. on axons of basket cells*
B. cells with axons grain *
C. with a axons of stellate cells *
D. fibers of the moss family
E. and a cell dendrites grains
F. and dendrites stellate cells

1721. In the cerebral cortex are distinguished:
A. associative fibers *
B. projection *
C. commissural *
D. spread moss family
E. peripheral
F. scansorial

1722. Sinusoids:
A. located in the bone marrow*
B. have a discontinuous basement membrane*
C. between endothelial cells are gaps *
D. endothelial cells, flat polygonal shape
E. are in the wall of the smooth muscle cells
F. located in all endocrine glands

1723. Postcapillaryvenule:
A. inner surface is coated with endothelial cells *
B. in the wall are pericytes*
C. can penetrate through the wall of the white blood cells *
D. endothelial cells lie on a basal membrane
E. the middle layer is formed by individual smooth muscle cells
F. in the middle layer of one two layers of smooth muscle cells

1724. Paracortical area lymph nodes are located mainly:
A. Tlymphocytes *
B. interdigitiry cells *
C. Tkillers *
D. dendritic cells
E. B cells
F. Blymphoblasts

1725. The structures of the medulla of lymph node:
A. brain strands *
B. brain sinuses*

C. trabeculae*
D. marginal sinuses
E. lymphoid nodules
F. venous sinuses

1726. In the thymus during accidental involution observed:
A. the absence of boundaries between the cortex and medulla*
B. mass death of lymphocytes *
C. in a reticuloepithelial cells appear large vacuoles *
D. phagocytosis by macrophages unmodified lymphocytes
E. growth of epithelial cells
F. the proliferation of reticular cells

1727. Sprout layer of epidermis cells are the following:
A. basal epithelial *
B. melanocytes *
C. dendrocytes*
D. keratinocytes
E. plasma cells
F. granular epithelial cells

1728. The horny layer of the epidermis:
A. consists of horny scales *
B. in the horny scales are fibrils *
C. contains the keratin *
D. in the thin skin thickens
E. are plasma cells
F. contains cells with nuclei

1729. Alveolocytes type I:
A. involved in gas exchange *
B. have a flattened shape *
C. in the cytoplasm and mitochondria small pinocytic vesicles *
D. on the apical surface of the cilia are
E. the granules contain
F. have a cubic shape

1730. In the wall of respiratory bronchioles:
A. muscle becomes thinner plate *
B. a singlelayer cubic epithelium *
C. in the epithelium cells are Clara *
D. has cancer
E. many goblet cells
F. a lot of ciliated cells

1731. In the lamina propria of the trachea located:
A. longitudinal elastic fibers *
B. lymph nodules *
C. ducts glands *
D. individual bundles of smooth muscle cells
E. smooth muscle cells from two layers
F. proteinmixed mucous glands

1732. The larynx has the following envelope:
A. mucosa*
B. fibrocartilaginous *
C. adventitia*
D. submucosa
E. muscle
F. serosal

1733. Features of the blood supply to the lung:
A. the power of the bronchi of the arteries of the systemic circulation *
B. in the arterioles of the pulmonary circulation venous blood *
C. into the capillaries of the alveoli enters the blood from the pulmonary circulation *
D. fenestrated capillaries of the alveolar type
E. the pulmonary artery into the lungs bring oxygenrich blood
F. the power of the arterial tissue bronchus pulmonary circulation

1734. The wall of the stomach:
A. surface epithelium simple columnar *
B. fundic glands simple tubular linear *
C. into the pyloric region of the deep gastric pits *
D. muscularis consists of two layers of smooth muscle tissue
E. in the lamina propria situated vegetative plexus Meissner
F. there is no submucosa

1735. In the mucous membrane of the digestive tube are distinguished:
A. the epithelial layer *
B. lamina propria*
C. muscle plate *
D. vegetative plexus of Auerbach
E. elastic membrane
F. multirow epithelium

1736. In the wall of the bile duct:
A. there is a mucous membrane*
B. has a muscular layer *
C. simple columnar epithelium *
D. has submucosa
E. epithelium pseudostratified
F. muscular layer of two layers of smooth muscle cells

1737. In general, the duct of the pancreas:
A. simple columnar epithelium *
B. circularly arranged smooth muscle cells in the mouth *
C. in the epithelium occur endocrine cells *
D. has muscular coat
E. are glands in the submucosa
F. multilayered epithelium

1738. The end sections of duodenal glands are located:
A. mucosal cells *
B. exocrine cells with acidophilic granules *

C. individual parietal cells *
D. the main cell
E. the limbic cells
F. are muscular elements

1739. In the distal part of the rectum distinguish the following areas:
A. cutaneous *
B. a bar *
C. intermediate *
D. folded
E. mucosa
F. muscle

1740. The structural features of the proximal tubule cells:
A. numerous bubbles pinocytic*
B. folds in the basal part tsitolemmy*
C. brush border *
D. no lysosomes
E. few mitochondria
F. carried out the secretion of amino acids and monosaccharides

1741. The muscular layer of the bladder:
A. inner layer of longitudinal *
B. the outer layer of longitudinal *
C. the middle layer of circular *
D. the inner layer of circular
E. the middle layer of the longitudinal
F. the outer layer of circular

1742. Features ejaculatory duct:
A. passes through the prostate gland *
B. a small thickness of the muscular layer *
C. outer sheath adherent to the stroma of the prostate *
D. is partly covered by serosa
E. is lined with transitional epithelium
F. the three layers in the muscle membrane

1743. Ductal epithelium of the epididymis:
A. most of the cells high prismatic *
B. are intercalated cells *
C. on the cell surface are stereocilia bundles *
D. comprises goblet cells
E. multilayer cubic
F. contains ciliated cells

1744. The structure features sustentocytes:
A. have recesses on the side surfaces *
B. forming between them tight junctions *
C. contain crystalloid inclusions *
D. is poorly developed smooth endoplasmic network
E. have rounded nuclei
F. have a prismatic shape

1745. Lobe testicles are located:
A. seminiferous tubules *
B. loose connective tissue *
C. interstitial cells *
D. seed artery
E. seminiferous tubules straight
F. Sertoli cells

1746. Prostate glands distinguish the following groups:
A. mucous*
B. submucosal*
C. key *
D. urethral
E. bulbourethral
F. seed

1747. Bulbourethral gland:
A. to the end sections are cubic and cylindrical cells *
B. found in the stroma of the connective and smooth muscle cells, striated muscle fibers *
C. open into the urethra*
D. opened in the vas deferens
E. epithelial cells are filled with a special crystalloid
F. are placed in a vial of the vas deferens

1748. The condition of the endometrium in the postmenstrual period:
A. occurs proliferation of the epithelium *
B. has a small thickness*
C. the formation of new cancer *
D. in the gaps glands accumulates secret
E. formed in the stromadecidual cells
F. epithelium of the uterine glands actively secretes

1749. Variety of excretory ducts of the mammary gland:
A. milk sinuses *
B. moves milk *
C. aleolyarny course *
D. common duct
E. intercalated ducts
F. striated ducts

1750. The parathyroid glands are following cells:
A. oxyphilic*
B. the main dark *
C. the main light *
D. chromophobe
E. intermediate
F. interstitcy

1751. From mesenchyme splanchnotome develop:
A. blood vessels *
B. smooth muscle tissue *

C. the connective tissue *
D. mesothelia
E. bronchial epithelium
F. cartilage

1752. The primary derivatives of the mesoderm are:
A. somites*
B. splanhnotom*
C. nefrotom*
D. the epidermis
E. placode
F. prechordal plate

1753. Extraembryonic mesoderm is involved in the development of:
A. the yolk sac *
B. chorionic *
C. amnion *
D. splanchnotome
E. trophoblast
F. the yolk sac epithelium

1754. Because of the embryonic endoderm develop:
A. gastric epithelium*
B. liver parenchyma *
C. colon epithelium *
D. kidney
E. epithelium of the oral cavity
F. adenohypophysis

1755. Allantois:
A. its epithelium is endodermal origin *
B. to its formation participates extraembryonic mesoderm *
C. acts as a gas exchange and allocation *
D. in its wall formed primary germ cells
E. involved in its formation trophoblast
F. it is derived from mesoderm epithelium

1756. Because dermal ectoderm formed:
A. the epidermis *
B. buccal *
C. tooth enamel *
D. thymic epithelium
E. stomach epithelium
F. the gut epithelium

1757. The egg man:
A. to distinguish it vegetative and animal pole *
B. contains yolk inclusions *
C. for her missing cell center *
D. has a diploid set of chromosomes
E. polyletcithal
F. therein underdeveloped granular EPS

1758. Blastula person:
A. has a cavity with fluid *
B. wall is formed trophoblast*
C. is within the cluster of cells embryoblast*
D. consists of 32 blastomeres
E. wall is formed by the blastomeres
F. is formed even after complete cleavage of the zygote

1759. Functions of amniotic membrane:
A. protects the embryo and fetus from shocks *
B. creates a certain concentration of salts in the amniotic fluid *
C. produces the amniotic fluid *
D. trophic
E. gas exchange
F. endocrine

1760. Glands with merocrine secretion type:
A. salivary *
B. sweat *
C. pancreas *
D. fundic
E. milk
F. tallow

1761. A singlelayer cubic epithelium lining:
A. collecting ducts of the kidneys *
B. bronchioles *
C. intercalated ducts of the salivary glands *
D. the gallbladder
E. striated ducts of the parotid gland
F. small intestine

1762. The multilayered epithelium not keratinizing distinguished:
A. basal layer *
B. a layer of adipositiesc*
C. prickly layer *
D. cubic cells
E. endocrine cells
F. Pearshaped cells

1763. Ciliated cells in the epithelium has:
A. of the bronchi *
B. of the uterus *
C. of the fallopian tubes *
D. of the vas deferens
E. of the renal tubules
F. ducts of the salivary glands

1764. The transitional epithelium lining:
A. bladder *
B. the ureter *

C. renal calyx *
D. intestine
E. the uterus
F. the vas deferens

1765. Myoepithelial cells:
A. at the epithelial origin *
B. contain contractile filaments *
C. are Avilable in the terminal parts of the breast *
D. are found in the gastric glands
E. block secretions
F. have a spindleshaped

1766. Neutrophils:
A. their specific marker enzyme granules alkaline phosphatase*
B. the core segment has a 34 *
C. allows to determine the sex of the person *
D. comprise lipid inclusions
E. synthesized immunoglobulins
F. secrete histamine

1767. The characteristic of eosinophils is true:
A. the kernel often has 2 segments *
B. in the specific granule contains histaminase *
C. is 2 5% of the total number of leukocytes *
D. account for 3540% of the total number of leukocytes
E. contained in the specific granules of histamine
F. contains basophilic granules

1768. In the specific granules of basophils contain:
A. histamine*
B. heparin *
C. histidindecarboxilaese*
D. lysozyme
E. crystalloid
F. histaminase

1769. Monocytes characterized by:
A. a large number of lysosomes *
B. output from the bloodstream into the connective tissue *
C. the implementation of phagocytosis *
D. the presence of specific granules
E. activity histaminase
F. a segmented nucleus

1770. Characteristic features of granulocytes:
A. the presence of a specific grain *
B. nuclei segmentation *
C. azurophilic granules *
D. absence of a nucleus
E. a large number of peroxisomes
F. a large number of lipid inclusions

1771. Specify the stage relating to thrombocytopoiesis:
A. megakaryocyte*
B. megakaryoblasts*
C. promegakariotsit*
D. myeloblast
E. progranulocyte
F. metamielotsit

1772. The characterization of red blood cells is true:
A. does not contain a nucleus *
B. are filled with hemoglobin *
C. conveyed gases and other substances *
D. the life expectancy is no more than one week
E. have all organelles in a small amount
F. comprise inclusion body

1773. The process of thrombocytopoiesis:
A. increases the size of the cells *
B. increases the number of pellets *
C. a significant increase in the core and segmentation *
D. reduces the number of organelles
E. reduced the size of the nucleus
F. in platelets found the remains of the core megakaryocyte

1774. Localization of dense connective tissue executed:
A. ligament *
B. the dura mater *
C. tendons *
D. thyroid capsule
E. mesh layer of the skin
F. pia

1775. The structural features of mature fibroblasts:
A. process form *
B. a large amount of granular endoplasmic reticulum *
C. a lot of mitochondria *
D. oval
E. is the most developed of the smooth EPS
F. few mitochondria

1776. Localization of dense irregular connective tissue:
A. capsule of the spleen *
B. the dermis of the skin *
C. between the rings of the trachea *
D. albuginea testis
E. tendon
F. around blood vessels

1777. The characterization of mast cells is true:
A. contain numerous granules *
B. contained in the granules, heparin, histamine *

C. pellets have a mesh, lamellar, crystalloid structure *
D. reduce the permeability of vascular wall
E. increases blood clotting
F. have the form of process

1778. Which of the cells involved in immune reactions:
A. plasma cells *
B. macrophages *
C. Tlymphocytes*
D. adipocytes
E. fibroblasts
F. fibroblasts

1779. Cells macrophafs systems are characterized by:
A. capable of completeness of phagocytosis*
B. have on their surface immunoglobulin receptors *
C. promonocytes derived from bone marrow or blood monocytes *
D. derived from granular neutrophilic leukocytes
E. they include fibroblasts, reticulocytes
F. synthesized various immunoglobulins

1780. Enter the correct answers in the characterization chondroblast:
A. synthesized components of the intercellular substance *
B. are arranged in perichondrium *
C. involved in cartilage growth apposition *
D. involved in cartilage resorption
E. have a starshaped
F. provide interstitial cartilage growth

1781. Hyaline cartilage is in:
A. laryngeal*
B. the trachea *
C. large bronchi *
D. small bronchi
E. of the diaphysis of long bones
F. the bronchioles

1782. Localization of fibrocartilage:
A. between the tendon and the hyaline cartilage *
B. intervertebral discs *
C. half drive compound (symphysis) *
D. pinna
E. the epiglottis
F. the major bronchi

1783. The structure of fibrous cartilage:
A. collagen fibers are arranged in parallel *
B. chondrocytes are arranged in a chain *
C. no perichondrium *
D. located on the periphery chondroblasts
E. is covered with perichondrium
F. collagen fibers are arranged randomly

1784. The growth of cartilage is due to:
A. chondrogenic layer perichondrium *
B. division prechondroblasts*
C. layers intercellular substance under the perichondrium *
D. division of chondrocytes such as 2
E. dividing chondrocyte3 type
F. thickening of the collagen fibers

1785. Features of osteoblasts:
A. a high activity of alkaline phosphatase *
B. well developed granular endoplasmic reticulum, mitochondria *
C. a cubic or angular form *
D. long processes
E. fusiform shape
F. contain numerous lysosomes

1786. Enter the correct characterization of osteon in:
A. between the plates are osteocytes *
B. is formed by bony plates *
C. located in the center of the channel with the blood vessels *
D. located in the peripheral portion of osteoblasts
E. between the lamellae are the blood vessels
F. in plates collagen fibers are arranged randomly

1787. Histological and anatomical types of bone:
A. leaf *
B. reticulofibrous*
C. compact*
D. fibrous
E. the trabecular
F. fibroelastic

1788. Bone tissue differs from the cartilage:
A. by the presence of blood vessels *
B. a high degree of mineralization *
C. is constantly being rebuilt *
D. absence of blood vessels
E. the presence of isogenic groups
F. fewer minerals

1789. The structure of the cortical bone:
A. consists of a periosteum fibrous outer and inner layers of the cell *
B. endosteum separates bone from bone marrow contains the osteogenic cells*
C. into the shaft of the plate has the general exterior *
D. in the diaphysis are layers of hyaline cartilage
E. formed epiphysis compact bone
F. osteocytes located in the periosteum

1790. Cancellous bone:
A. has a lamellar structure *
B. bone plates form a crossbar (trabecula)*

C. between the slats is loose connective tissue *
D. formed reticulofibroz cloth
E. contains no blood vessels
F. between the slats is cartilage

1791. Types of cardiomyocytes
A. conductive *
B. secretory *
C. contractile *
D. intercalary
E. basal
F. beam

1792. Cardiac muscle tissue
A. develops from mioepicardial plate *
B. has a cellular structure *
C. has a transverse striations *
D. has a structure simplastic
E. develops from the myotome
F. cardiomyocytes are spindleshaped

1793. Skelet muscle fiber:
A. has a noncellular structure *
B. cytolemma forms a Ttube *
C. located at the periphery of the nucleus *
D. contains a large amount of granular EPS
E. contains numerous lysosomes
F. Ttubules formed endoplasmic reticulum

1794. Features of the structure of conductive cardiomyocytes:
A. is not developed by TSystem *
B. few myofibrils *
C. mitochondria are small, are uniformly *
D. are secretory granules
E. comprise lipid inclusions
F. is well developed Tsystem

1795. In skeletal muscle fiber:
A. myofibrils are arranged in parallel, combined into bundles *
B. located between the myofibrils mitochondria chain *
C. myofibrils divided Zlines in sarcomeres *
D. located at the periphery of myofibrils
E. Ttubules are formed tubules sarcoplasmic reticulum
F. the boundaries of sarcomeres are the Mline

1796. Triad skeletal muscle fibers:
A. includes a Ttube *
B. includes two tank sarcoplasmic reticulum *
C. Ttubules cover every myofibrils *
D. Ttubules contain calcium ions
E. comprises two Ttubules
F. comprises two filaments and myosin Ttube

1797. In skeletal muscle:
A. muscle fibers are arranged in parallel *
B. with muscle fibers thin layer of loose connective tissue *
C. the muscle fibers together in bundles *
D. bundles of muscle fibers separated epimiziem
E. on the muscle fibers sensitive nerve endings are located
F. are located in the endomysium arteries and veins

1798. Characteristics of neurons:
A. size of 46 microns to 130 microns *
B. contain neurofibrils*
C. contain basophilic substance *
D. have appendages axon and dendrites
E. have appendages
F. contain numerous lysosomes

1799. Microglia
A. contain numerous lysosomes *
B. have branching processes *
C. are glial macrophages *
D. is called neyrolemmocytes
E. have appendages
F. contain a lot of peroxisomes

1800. The myelin sheath of nerve fibers:
A. formed neyrolemmocytes*
B. contains lipids *
C. forming notch *
D. is a perineurium
E. is formed by processes of astrocytes
F. in its formation involves fibrous astrocytes

1801. Types of encapsulated nerve endings:
A. tactile corpuscles *
B. VaterPacini corpuscles *
C. flask Krause *
D. Merkel cells
E. area Herring
F. Hassall's corpuscles

1802. The motor nerves:
A. formed by motor neuron axons *
B. accompanied lemmocytes*
C. end in the muscle fibers *
D. have a myelin sheath
E. are accompanied by astrocytes
F. formed dendrites

1803. Myelinated nerve fiber:
A. is covered by myelin sheath *
B. contains one axial cylinder *

C. conducts impulses at a rate of up to 120 m / s *
D. comprises a plurality of axial cylinders
E. the core is in the center lemmocyte
F. in the formation of myelin, astrocytes are involved

1804. The structure of the nerve cell dendrites:
A. a branching process *
B. the presence of substances chromatophilic*
C. significant content neyrotubul and neurofilament*
D. long unbranched appendage
E. contains numerous mitochondria
F. contains a granular EPS

1805. The characteristic ependimocytes true:
A. line the spinal canal and brain ventricles *
B. involved in the formation of CSF *
C. on the apical surface of the cilia are *
D. located under the meninges
E. included in the bloodbrain barrier
F. are involved in the formation of myelin

1806. Features of the structure of the nucleus of the neuron:
A. the core is usually one *
B. dispersed chromatin *
C. large nucleolus, a central location, "owl eye"*
D. nuclei are usually three to five
E. is sharply eccentrically
F. chromatin strongly helical

1807. Characteristics of the axon:
A. branching mostly in the terminal part *
B. the presence of agranular EPS **
C. elongated filamentous mitochondria *
D. dichotomous branching
E. the presence of substances chromatophilic
F. multiple lysosomes

1808. Chromatophilic substance in the neuron:
A. detected by staining with aniline dyes *
B. is localized in the dendrites and perikaryon*
C. basophile due to the presence of RNA *
D. detected by staining with hematoxylineosin
E. is localized in the axon, at least in the dendrites
F. include lumps in the structure of the smooth EPS

1809. Microglial cells:
A. are derived from hematopoietic stem cells *
B. elongated nucleus with compact chromatin *
C. have phagocytic activity *
D. neuroblasts originate from the neural crest
E. large eccentric nuclei, dispersed chromatin
F. have numerous long branching processes

1810. Oligodendrocytes:
A. the most numerous glial cells *
B. are involved in neuronal tropic*
C. involved in the formation of shells around nerve fibers *
D. are different from neurons lack of EPS and the Golgi complex
E. perform muscleskeletal function
F. have numerous strong branching processes

1811. For the axons of the nerve fiber is characterized by:
A. formed neuroplasm nerve cell *
B. surface is covered axolemma*
C. neurofilaments and neyrotubules oriented lengthwise *
D. in the composition of his only axolemma
E. neurofibrils and randomly oriented neyrotubules
F. mitochondria is very little

1812. Sources of the nervous system:
A. neural tube *
B. ganglion plate *
C. crest *
D. prechordal plate
E. splanhnotom
F. nefrotom

1813. Cerebellar glomeruli contain:
A. dendritic cells grain *
B. axons of Golgi cells type II *
C. the end of the mossy fibers *
D. dendrites satellite cells
E. the axons of the cells of Golgi type I
F. axons of basket cells

1814. The gray matter of the spinal cord is made up of:
A. multipolar neurons *
B. myelinated nerve fibers *
C. glial *
D. bipolar neurons
E. psevdounipolar neurons
F. pyramidal cells

1815. In the spinal cord following types of cells:
A. radicular *
B. beam *
C. internal *
D. ganglionic
E. pyramidal
F. spindle

1816. The rear horn of the spinal cord are located:
A. a gelatinous substance *
B. your own kernel *

C. the core Clark *
D. parasympathetic nucleus
E. sympathetic nucleus
F. motor nucleus

1817. The type of the smooth cortical layers are most pronounced:
A. pyramidal *
B. polymorphic *
C. ganglion *
D. the inner granular
E. pottle
F. the external granular

1818. Sheaf cells of the spinal cord are:
A. neurons own kernel *
B. neurons in the nucleus of breast *
C. neurons in the medial intermediate nucleus *
D. neurons of the lateral intermediate nucleus
E. neurons in the medial motor nucleus
F. neurons of the lateral motor nucleus

1819. The types of neurons in autonomic ganglia:
A. long axon *
B. processus*
C. associative *
D. beam
E. bipolar
F. radicular

1820. In the white matter of the spinal cord contains:
A. myelinated nerve fibers *
B. glial partitions *
C. unmyelinated nerve fibers *
D. nerve cells
E. associative cells
F. fat cells

1821. Meninxes:
A. the dura mater consists of dense connective tissue executed *
B. in the pia mater large number of blood vessels *
C. arachnoid presented loose connective tissue*
D. arachnoid contains dense connective tissue
E. dura borders with brain tissue
F. the arachnoid membrane is bordered to the brain

1822. The structure of the peripheral nerve:
A. between the nerve fibers located endoneurium*
B. forms an outer shell epineurium of the nerve trunk *
C. bundles of nerve fibers separated by perineurium*
D. collagen fibrils in the epineurium arranged circularly
E. epineurium separates the bundles of nerve fibers
F. only formed myelin nerve fibers

1823. Morphological characteristics of the sympathetic nervous system:
A. it includes the vegetative nucleus and lateral horns of breast spinal cord *
B. ganglia form the truncussympaticus*
C. short preganglionic fibers *
D. includes a nucleus of the medulla oblongata
E. ganglia are located in the internal organs
F. long preganglionic fibers

1824. Dioptric apparatus of the eyeball include:
A. cornea*
B. vitreous *
C. lens *
D. the ciliary body
E. iris
F. the choroid

1825. The organ of smell:
A. located in the olfactory region of the nasal cavity*
B. receptor cells are located between the support cells *
C. on the surface of the receptor cells are cilia *
D. receptor cells epitheliosensory
E. comprises boundary cells
F. on the apical surface of supporting cells cilia

1826. Eardrum:
A. is formed by bundles of collagen fibers *
B. the outside is covered by stratified squamous epithelium of the stratum *
C. the inner surface is lined with a single layer of squamous epithelium *
D. from the outside is covered with a single layer of squamous epithelium
E. collagen fibers are arranged randomly
F. is the basis of the muscleelastic fabric

1827. The tunnel ofCorti:
A. formed columnar supporting cells *
B. separates the outer and inner group of cells *
C. pass through it dendrites spiral ganglion neurons *
D. contains loose connective tissue
E. formed phalanx cells
F. formed hair cells

1828. Varieties of the organ of Corti supporting cells:
A. columnar *
B. metacarpophalangeal*
C. cells Claudius *
D. flaskshaped
E. intercalary
F. hair

1829. The transparency of the cornea caused by:
A. a special arrangement of collagen fibers *
B. the lack of blood vessels in their own substance *

C. a lot of glycosaminoglycans in an amorphous substance *
D. presence of a large amount of glucuronic acid
E. cells in the absence of its own substance
F. increased permeability

1830. The structure of the sclera:
A. is formed by dense connective tissue executed *
B. is covered by the conjunctiva *
C. at the interface with the cornea attaching venous sinus *
D. is covered with a single layer of squamous epithelium
E. is formed by loose connective tissue
F. bundles of collagen fibers are moving in the iris

1831. The structure of the olfactory cells right:
A. is a neurosensory *
B. in the distal portion of the peripheral process has expansion mace *
C. on the surface of the clubs are cilia *
D. are epitheliosensory
E. granular EPS located in the basal part of the cell
F. supporting cells are the connective tissue

1832. The structural features of the macula organ of equilibrium:
A. consists of a receptor and supporting cells *
B. receptor cells are epitheliosensory*
C. the surface of the macula covered otolith membrane *
D. sensory cells lie at the surface of the support
E. receptor cells are neurosensory
F. on the surface of the supporting cells are cilia

1833. In the intermediate pituitary:
A. endocrinocytes arranged as strands *
B. are melanotropnye cells *
C. produced lipotropic hormone *
D. are pituitary cells
E. hormones accumulate in the follicles
F. end axons of neurosecretory cells

1834. Enter the correct answers about the structure of the posterior pituitary:
A. contains the axons of neurosecretory cells of the hypothalamus *
B. comprises glial cells *
C. are cumulative calf Herring *
D. endocrine cells form cords
E. endocrine cells form follicles
F. parenchyma up neuroendocrine cells

1835. Cells beam and reticular zones of the adrenal gland are characterized by:
A. numerous lipid inclusions *
B. mitochondria with vesicular cristae *
C. agranular EPS *
D. a large number of lysosomes
E. mitochondria with lamellar cristae
F. intracellular tubules

1836. In hyperthyroidism:
A. forms a wall of the follicle folds*
B. in the colloid follicle vacuoles appear *
C. thyrocytes high prismatic *
D. thyrocytes flatten
E. colloid in follicles compacted
F. reduces the number of microvilli thyrocyte

1837. Gonadotropic cells of the pituitary gland influence:
A. ovogenesis*
B. spermatogenesis *
C. the sex hormones *
D. adrenal cortex
E. thyroid function
F. the adrenal medulla

1838. In case of insufficient production of thyroid hormones:
A. increases the production of thyrotropin*
B. vacuolating cytoplasm tireotropocytes*
C. observed hypertrophy tireotropocytes*
D. is an accumulation of oxytocin in the posterior pituitary
E. increases the height thyrocyte
F. accumulate lipid droplets in thyrocytes

1839. The structural features of the main endocrine parathyroid:
A. basophilic cytoplasm *
B. a lot of free ribosomes and policy *
C. are secretory granules *
D. is weakly developed granular endoplasmic reticulum
E. oxyphilic cytoplasm
F. few mitochondria

1840. Find the right answers on the mesh zone of the adrenal cortex:
A. endocrinocytes form a network *
B. less lipid inclusions as compared with the beam area *
C. into endocrine cells vacuolar EPS *
D. its function is regulated by the gonadotropic cells
E. endocrinocytes form glomeruli
F. in the mitochondria cristae plate endocrinocytes

1841. In the development of the adrenal glands are involved:
A. splanhnotom*
B. coelomic epithelium*
C. ganglion plate *
D. nefrotom
E. placode
F. somites

1842. Adrenal cortex:
A. develops from splanchnotome*
B. is subdivided into three zones *

C. contains a layer of undifferentiated cells *
D. produces a protein hormones
E. endocrine cells are neural tissue
F. the regulation does not depend on the pituitary

1843. Veins amyous type include:
A. retinal vein *
B. veins bones *
C. veins of the pia mater *
D. femoral
E. superior vena
F. subclavian

1844. Variations cells cardiac conduction system:
A. pacemakers *
B. cells bundle branch block *
C. cells Purkinje fibers *
D. intercalary
E. secretory
F. typical of cardiomyocytes

1845. In the wall of blood capillaries are:
A. endothelial cells *
B. pericytes*
C. the basal membrane*
D. the internal elastic membrane
E. smooth muscle cells
F. layer podendotelial

1846. Avilable wall arterioles:
A. there is a smooth muscle layer 12 in the middle shell *
B. endothelial cells and myocytes in contact with each other *
C. has an internal elastic membrane *
D. attaching the outer elastic membrane
E. are fenestrated elastic membrane
F. no sub endothelial

1847. By decreasing the caliber of the arteries:
A. reduces the thickness of the tunica *
B. disappears outer elastic membrane *
C. reduced the number of layers of smooth muscle cells *
D. increases the number of collagen fibers
E. increases the number of elastic fibers
F. internal and external elastic membrane reserved

1848. Veins with weak development of muscular elements include:
A. neck veins *
B. superior vena *
C. facial *
D. femoral
E. inferior vena
F. shoulder

1849. Features of conducting cells of the heart:
A. little myofibrils *
B. is not developed by TSystem *
C. a lot of glycogen *
D. well developed TSystem
E. a lot of lysosomes
F. myofibrils arranged in the center of the cell

1850. Conductive heart cells are located:
A. under the endocardium *
B. in the thickness of the myocardium *
C. in papillary muscles *
D. pericardial
E. between the myocardium and the epicardium
F. valves

1851. Avilable thoracic duct:
A. wall at the level of the most developed diaphragm *
B. the inner lining of the small and medium *
C. on the border of the inner and middle membranes site has elastic plexus fiber *
D. the thickness of the muscle layers increases in the distal direction
E. no valves
F. is the most developed in the wall of the distal part

1852. Tdependent areas are located:
A. to paracortical zone of lymph nodes*
B. in the area of the spleen periarterial*
C. between the follicles of Peyer's patch *
D. in the mantle zone of the white pulp of the spleen
E. strands in brain lymph node
F. in a breeding center spleens

1853. The micro environment of T and B lymphocytes in the lymphoid organs comprise:
A. macrophages *
B. interdigitir cells *
C. dendritic cells *
D. basophils
E. erythrocytes
F. plasmocytes

1854. Differences from the medulla of the thymus cortical:
A. contains less lymphocytes *
B. in acinar epithelial cells contained vacuoles *
C. contains layered calf *
D. has the reticular stroma
E. the presence of trabecular
F. are brain bands

1855. In the center of reproduction of lymphoid follicles lymph nodes are:
A. lymphoblasts*
B. macrophages *

C. dendritic cells *
D. tissue basophils
E. fibroblasts
F. neutrophils

1856. Variations of T lymphocytes:
A. Tkiller *
B. T helper *
C. Tsuppressors
D. plasma cells
E. macrophages
F. the suppressor

1857. The lymphatic nodules of the spleen differ from those in lymph nodes:
A. the presence of the central artery *
B. the smaller size *
C. the presence of the Tzone*
D. the presence of germinal center
E. presence of reticular cells
F. the presence of macrophages

1858. Strands of brain lymph node:
A. produced plasma cells *
B. are blood vessels *
C. are macrophages *
D. located germinal center
E. is a Tzone
F. arranged periarterial vagina

1859. Features of the venous sinus of the spleen:
A. discontinuous basal membrane *
B. the absence of pericytes*
C. the presence of circular reticular fibers in the wall *
D. has circular elastic fibers
E. has an internal elastic membrane
F. the presence of a longitudinal muscle layer

1860. The stroma of the spleen are:
A. capsule *
B. trabeculae*
C. reticulum *
D. pulp cords
E. periarterial vagina
F. lymphoid nodules

1861. Tdependent zone of the spleen:
A. located around the central artery *
B. it consists mainly of T lymphocytes *
C. contains interdigitir cells *
D. composed mainly of Tlymphoblasts
E. contains plasma cells
F. located in the red pulp

1862. At age involution of the thymus:
A. reduces the number of lymphocytes *
B. increases the amount of adipose tissue *
C. grows connective tissue *
D. is more noticeable boundary between the cortex and medulla
E. is growing epithelial tissue
F. increased the number of lymphocytes

1863. In the wall of the pulmonary alveoli are:
A. macrophages *
B. alveolocytes type I *
C. alveolocytes type II *
D. plasma cells
E. tissue basophils
F. ciliated cells

1864. Pulmonary bronchial mucosa are:
A. multirow ciliated epithelium *
B. lamina propria*
C. muscle plate *
D. muscleelastic layer
E. muscle sheath
F. fibrous layer

1865. Protein mucous glands in the wall are:
A. trachea*
B. bronchi caliber*
C. of the bronchi medium caliber *
D. respiratory bronchioles
E. terminal bronchioles
F. small bronchi

1866. The characteristics of small caliber bronchial wall:
A. developed muscular plate *
B. the lack of cartilage *
C. absence of iron *
D. the presence of cartilage islands
E. multirow epithelium
F. duallayer epithelium

1867. The glands of the respiratory tract:
A. located in the submucosa *
B. are proteinmucous *
C. complex alveolartubular *
D. mucous
E. simple tubular
F. simple alveolartubular

1868. In the epithelium cells of the bronchial tubes are the following:
A. ciliated *
B. not limbic *

C. secretory *
D. pneumocytes type 1
E. plasma cells
F. macrophages

1869. The differences in the structure of the bronchi medium caliber of the large:
A. reduction in the thickness of the mucous membrane *
B. the presence of elastic cartilage islands *
C. reducing the height of the epithelial layer *
D. absence of cartilage
E. becomes a singlelayer cubic epithelium
F. increase in the number of goblet cells

1870. Avilablealveolocytes type 2:
A. developed agranular EPS *
B. the presence in the cytoplasm of cells osmiophil*
C. large mitochondria *
D. well developed granular EPS
E. much the peroxisomes
F. are oxyphilic pellets

1871. The main components of the surfactant:
A. phospholipids *
B. proteins *
C. glycoproteins *
D. glycogen
E. lipoproteins
F. carbohydrates

1872. In the epithelium of the nasal cavity are following cells:
A. ciliated *
B. mikrovilli*
C. goblet *
D. columnar
E. brush
F. Clara cell secretory

1873. Outlet ducts of sweat glands:
A. lined with twolayer cubic epithelium*
B. have a tortuous course *
C. opening on the skin surface *
D. are lined with a single layer of cuboidal epithelium
E. short, straight
F. are lined with a multilayered epithelium not keratinizing

1874. Sweat glands:
A. apocrine merocrine*
B. simple tubular linear *
C. secretory end section located in the reticular layer *
D. only merocrine
E. simple alveolar branched
F. simple branched tubular

1875. Thorny layer of the epidermis:
A. cells are polygonal shape *
B. connected to the desmosomes the cells *
C. meet macrophages *
D. cells containing keratohyalin
E. between the cells are close contacts
F. are present granular leukocytes

1876. Papillary dermis:
A. consists of loose connective tissue *
B. contains Meissner corpuscles*
C. defines the pattern of the skin of the fingers *
D. contains VaterPacini corpuscles
E. comprises end sections of sweat glands
F. is formed by dense connective tissue executed

1877. The root of the hair include:
A. cortex *
B. medulla *
C. cuticle *
D. dermal sheath
E. pin
F. muscle fibers

1878. Actinic at the root of the hair is observed in:
A. the cortex *
B. the cuticlee*
C. medulla *
D. the outer root sheath
E. basal layer
F. hair bag

1879. The apocrine sweat glands are:
A. to the forehead *
B. in the armpit *
C. into the anus *
D. in the skin of palms
E. into the skin of the back
F. in the skin of the abdomen

1880. In the process of keratinization of the epidermis are involved:
A. epitheliofibril*
B. keratohyalin*
C. keratinosoms*
D. cells thorny layer
E. mitochondria
F. macrophages

1881. The types of cells fundic glands of the stomach:
A. parietal *
B. the main *

C. mucous *
D. the limbic
E. basal
F. goblet

1882. In education, the villi of the small intestine are involved:
A. singlelayer epithelium limbic*
B. lamina propria*
C. smooth muscle cells from the plate*
D. submucosa
E. muscle sheath
F. heavy connective tissue

1883. Features of the submandibular gland of parotid:
A. the presence of mixedend department *
B. a branched striated ducts *
C. poorly developed intercalary ducts *
D. greater interlobular ducts
E. short straight striated ducts
F. the presence of mucous end sections

1884. Avilable sublingual gland:
A. contains protein, mucous and mixed end section *
B. very short striated ducts *
C. wide interlobular septum *
D. dominated the protein end section
E. no protein crescents
F. in the interlobular ducts of a singlelayer cubic epithelium

1885. Proper cancer of the esophagus:
A. located in the submucosa *
B. complicated tubular alveolar branched *
C. in the end sections predominant mucosal cells *
D. predominate protein cells
E. located in the lamina propria
F. located mainly in the transition area in the stomach

1886. The structural features of the fundus of the stomach:
A. asimple tubular gland long unbranched **
B. in the major glands predominate and parietal cells *
C. slight gastric pits *
D. in the gland mucous cells predominate
E. in cells of the endocrine glands have
F. astric pit depth

1887. The cells in the crypt epithelium composed colon:
A. the limbic *
B. goblet*
C. endocrine *
D. ciliate
E. parietal
F. ensheathing

1888. Select the endocrine cells of the stomach:
A. D *
B. A *
C. G *
D. N
E. S
F. I

1889. In the mature tooth distinguish the following parts:
A. enamel *
B. cement *
C. dentin *
D. dental bag
E. braces
F. enamel organ

1890. The body of the tooth enamel are distinguished:
A. an inner layer *
B. interlayer *
C. an outer layer *
D. granular layer
E. mesenchymal layer
F. basal layer

1891. In the ileum, unlike skinny:
A. short villi *
B. larger lymphoid follicles *
C. over goblet cells *
D. higher villi
E. less goblet cells
F. is more pronounced muscle plate

1892. Features in the structure of the wall of the colon:
A. in the epithelium of the crypts are many goblet cells *
B. there is no lint *
C. in the submucosa numerous lymphoid follicles *
D. in the crypts is dominated by the limbic cells
E. singlelayer cubic epithelium
F. in a large number of crypts Paneth cells

1893. Dentin in a tooth is:
A. at the border of the enamel dentin *
B. at the boundary of the dentine with cement *
C. between dentin and odontoblasts*
D. around the dentinal tubules
E. enamel
F. in the periodontium

1894. Features of blood circulation in the liver:
A. in the mixed blood hemocapillars*
B. to the liver include hepatic artery and portal Vienna*

C. hepatic vein branches are not accompanied arteries *
D. in the liver include hepatic artery and hepatic vienna
E. in the center of the slices passes central artery
F. blood in the liver lobule flows from the center to the periphery

1895. Pancreatic acinus:
A. consists of 812 cell *
B. in the apical secretory granules of the atsinocytes*
C. in the center of acinar cells visible centroatsinoz*
D. atsinocytes secrete apocrine for type
E. secretory granules in the basal part atsinocytes
F. in the center of the acinar cells located atsinoinsular

1896. In the lobules of the pancreas are distinguished:
A. intercalated ducts *
B. mezatsinozducts *
C. endocrine islets *
D. striated ducts
E. intermediate ducts
F. alveolar ducts

1897. In the pyloric glands of the stomach:
A. is dominated by the mucous cells *
B. branched end section *
C. no major cell *
D. are Paneth cells
E. has three kinds of endocrine cells
F. straight end section

1898. Features threadlike papillae language:
A. draw out *
B. the epithelium undergoes keratinization *
C. no taste buds *
D. there is no secondary papillae
E. in the epithelium, taste buds are
F. are on the lower surface of the tongue

1899. Peyer's patches:
A. located in the ileum *
B. found in the duodenum *
C. occupy mucosa and submucosa *
D. are found in the colon
E. is the accumulation of granular leukocytes
F. located between intestinal crypts

1900. Features of the esophageal mucosa, unlike other sections:
A. a multilayer epithelium not keratinizing *
B. cardiac glands located in the lamina propria of two groups *
C. in the upper part of the esophagus muscle in the plate only longitudinal smooth muscle bundles *
D. pseudo stratified epithelium
E. in the laminapropria of the gland has its own
F. in the muscle plate three layers of muscle cells

1901. In mitotic telophase division occurs :
A. chromosome decondensation*
B. the formation of the nuclear envelope*
C. cytotomy *
D. appearance of nucleoli in the nuclei of the daughter cells *
E. condensation of chromosomes
F. chromosome segregation at the poles
G. the disappearance of the nucleolus
H. the formation of the metaphase plate

1902. The derivatives of the ectoderm are:
A. ganglion plate*
B. placode *
C. prechordal plate*
D. neural tube *
E. somites
F. dermatome
G. splanhnotom
H. nefrotom

1903. Germs of the axial organ rudiments are:
A. neural tube *
B. nefrotom *
C. splanhnotom *
D. somites *
E. allantois
F. mesenchyme
G. chorion
H. prechordal plate

1904. From the somites develop :
A. the dermis of the skin *
B. skeletal muscle tissue *
C. bone *
D. cartilage *
E. splanhnotom
F. nefrotom
G. the epidermis
H. heart muscle tissue

1905. Provisionally human bodies include:
A. chorion *
B. the yolk sac *
C. allantois *
D. the amniotic sac*
E. serosa
F. trophoblast
G. nefrotom
H. placode

1906. When gastrulation in humans:

A. 2 processes are observed: delamination and immigration*
B. is a division embryoblast in the epiblast and hypoblast*
C. in the epiblast forms the ectoderm and mesoderm*
D. in the epiblast formed primitive streak *
E. and intussusception observed delamination
F. of the hypoblast forms the ectoderm
G. the ectoderm, mesoderm and endoderm are formed by delamination
H. at immigration forms endoderm

1907. The structure of the amniotic membrane:
A. to the formation of the wall involved extraembryonic mesoderm *
B. inner wall layer consists of the epithelium *
C. the source of the formation of the epithelium extraembryonic ectoderm*
D. the outer wall layer consists of connective tissue with blood vessels*
E. epithelium formed from extraembryonic endoderm
F. in the inner wall layer has blood vessels
G. stratified squamous epithelium
H. into the stroma of the amnion has a spongy layer of dense connective tissue

1908. Locating a simple squamous epithelium:
A. the peritoneum *
B. the pleura *
C. the pericardium *
D. descending part of the loop of Henle in the kidney *
E. stomach
F. the mouth
G. the trachea
H. bile duct

1909. Locating a simple columnar epithelium:
A. uterus*
B. the intestines *
C. the stomach*
D. gall bladder *
E. bladder
F. esophagus
G. mouth
H. the total excretory duct of the parotid gland

1910. The function of epithelial tissues :
A. protection (barrier) *
B. secretory *
C. excretory *
D. absorptive *
E. participate in immune reactions
F. contractile
G. participation in the transmission of nerve impulses
H. generating the blood

1911. Indicate the correct answers in the characterization of red blood cells:
A. there are hemoglobin granules in their cytoplasm*
B. their main function is transport of oxygen*

C. the diameter is 7,1 7,9 m *
D. don't have kernel*
E. contain numerous organelles
F. have a spherical shape
G. the main function phagocytosis
H. is well developed Golgi complex

1912. B lymphocytes:
A. life span up to several months*
B. are transformed into plasma cells *
C. at cytolemmy have receptors*
D. provide humoral immunity *
E. contain specific granules
F. formed in the thymus
G. produce histamine
H. contain numerous organelles

1913. Functions of the blood basophils:
A. metabolism heparin*
B. the metabolism of histamine *
C. participate in allergic reactions *
D. regulation of blood clotting *
E. increase in blood clotting
F. to provide cellular immunity
G. the reduction of vascular permeability
H. transport

1914. In the process of erythropoiesis occurs:
A. the accumulation of hemoglobin*
B. the destruction and disappearance of the nucleus*
C. reduction in the number of organelles *
D. a reduction in cell size *
E. increase the number of organelles
F. the color change of the oxyphilic to basophilic
G. segmentation of the nucleus
H. the termination of the division at the stage of basophilic erythroblasts

1915. The cells that make up the makrofagical system:
A. microglia *
B. Kupffer cells*
C. osteoclasts *
D. lung macrophages *
E. plasma cells
F. lymphocytes
G. chondroblasts
H. lipocytes

1916. Tight decorated connective tissue is characterized by:
A. prevalence among fibroblasts cells*
B. an ordered arrangement of collagen fibers*
C. parallel bundles of collagen fibers are separated by fibrocytes *
D. a small amount of the basic substance *

E. multiple bundles of collagen fibers are separated by fibrocytes
F. the large number of cell types
G. the presence of large amounts of adipose tissue
H. by a large number of neutrophils

1917. Reticular tissue:
A. consists of reticulocytes and reticular fibers *
B. forms the stroma of the spleen *
C. has a reticular structure *
D. located in the bone marrow *
E. formed by the fibroblasts and collagen fibers
F. forms the thymic stroma
G. consists of a network of collagen fibers
H. is composed of collagen fibers and reticular

1918. Find the correct answers on macrophages:
A. capable of movement *
B. in the cytoplasm of numerous lysosomal *
C. have different shapes *
D. expressed phagocytic activity *
E. contain specific granules
F. lobed nucleus
G. in the cytoplasm of a lot of mitochondria
H. are rounded

1919. Perichondrium:
A. involved in the regeneration of cartilage *
B. consists of two layers *
C. in the outer layer has blood vessels*
D. the outer layer is formed by dense connective tissue executed *
E. inner layer has blood vessels
F. in the outer layer contains chondroblasts
G. an outer layer of loose connective tissue
H. consists of three layers

1920. Localization of elastic cartilage:
A. pinna *
B. the epiglottis *
C. the bronchi medium caliber*
D. the cartilage of the nose *
E. major bronchi
F. the joint surfaces
G. the intervertebral discs
H. rib surface

1921. Types of bone cells:
A. osteocytes *
B. osteoblasts *
C. osteoclasts*
D. osteogenic cells *
E. fibroblasts
F. chondrocytes

G. macrophages
H. fibrocytes

1922. The lamellar bone:
A. forms a compact substance of bones*
B. bony plates collagen fibers arranged in parallel *
C. in the channels are the blood vessels osteons*
D. between the bony plates located osteocytes *
E. all bone plates arranged parallel
F. between the plates are blood vessels
G. osteocytes in contact with blood vessels
H. collagen fiber plates are arranged randomly

1923. Development of the bone at the site of the cartilage:
A. begins with diaphysis *
B. is typical of the long bones*
C. the perichondrium is rebuilt in the periosteum*
D. secondary center of ossification is produced in the pineal gland *
E. characteristic of the flat bones
F. accompanied by the formation of cartilage in the center of osteons
G. begins with calcification of cartilage
H. under the perichondrium formed bone plates

1924. Sources of the development and regeneration of muscle tissue
A. myotome*
B. mesenchyme splanchnotome *
C. splanhnotom *
D. satellite cells in the skeletal muscle tissue *
E. sclerotome
F. dermatome
G. prechordal plate
H. endoderm

1925. Sarcomere :
A. limited Z lines *
B. extends in the mid line M *
C. contains actin and myosin filaments*
D. H band contains only myosin filaments *
E. A disk contains only the myosin filaments
F. I drive consists of actin and myosin filaments
G. H band contains actin filaments and myosin
H. Z Line is formed by myosin filaments

1926. Structural and functional unit of muscle tissue :
A. to the smooth muscle tissue myocyte *
B. in muscle tissue epidermal mioepiteliotcyte *
C. in the cardiac muscle cardiomyocyte *
D. in skeletal muscle the muscle fiber *
E. in the smooth muscle tissue – cardiomyocyte
F. in the cardiac muscle the muscle fiber
G. in skeletal muscle miosatellitotsit
H. into smooth muscle the muscle fiber

1927. Features of the contractile cardiomyocytes:
A. may branch *
B. are connected to each other forming a gusset wheel*
C. myofibrils arranged in parallel *
D. mitochondria are very long *
E. have numerous lysosomes
F. most developed granular EPS
G. contain secretory granules
H. the kernel is located under the plasmolemma

1928. Astrocytes:
A. performing a support function *
B. participate in the formation of the blood brain barrier *
C. have the form of process *
D. there are two types: fibrous and protoplasmic*
E. lining the brain ventricles
F. line the spinal canal
G. are rounded
H. to form a skin nerve fibers

1929. The main components encapsulated nerve endings :
A. axial cylinder*
B. capsule *
C. glial cells *
D. collagen fibers *
E. muscle fiber
F. neuron
G. the myelin sheath
H. astrocytes

1930. Unmyelinated nerve fibers :
A. surrounded by oligodendrocytes *
B. contain several axons *
C. are part of the autonomic nervous system *
D. lemmocytes core in the center *
E. comprise one axial cylinder
F. have notches in the shell
G. of the shell is formed by processes of astrocytes
H. the shell consists of several layers lemmocytes

1931. The types of nerve endings:
A. motor *
B. secretory *
C. encapsulated *
D. free *
E. mechanical
F. free encapsulated
G. encapsulated motor
H. the free movement

1932. Neurosecretory cells have the following features:

A. chromatophilic substance is mainly on the periphery of the body*
B. in the body and axons are numerous granules neurosecretion*
C. the nucleus of irregular shape *
D. neurosecretion enters the blood or cerebrospinal fluid *
E. the substance is not chromatophilic
F. neurosecretion granules in the axon terminals of focus
G. small nucleus heterochromatin
H. cells are small, multicore

1933. Astrocytes of nerve tissue:
A. forming a support apparatus CNS*
B. characterized by multiple, divergent processes in all directions *
C. There are two types: protoplasmic and fibrous*
D. in the cytoplasm of a small amount of EPS, free ribosomes and microtubules, many mitochondria *
E. developed in the cytoplasm of the supporting cytoskeleton
F. are only available in the gray matter of the central nervous system
G. cytoplasmic organelles rich in protein synthesis
H. the main function ensuring trophicity neurons

1934. Structural components of the spinal unit:
A. nerve fibers *
B. pseudounipolar neurons *
C. neuroglia*
D. connective tissue stroma *
E. ependimogliya
F. stellate neurons
G. multipolar neurons
H. fibrous astrocytes

1935. As part of the anterior spinal roots are:
A. the axons of the neurons of the lateral intermediate nuclei *
B. axons of motor neurons *
C. axons of neurons in the medial motor nucleus *
D. neurites radicular cells*
E. axons of neurons intermediate nuclei
F. beam cell axons
G. the axons of the neurons of the nucleus Clark
H. dendrites of motor neurons of the anterior horns

1936. The bloodbrain barrier:
A. includes capillary endothelium*
B. astrocyte processes surrounding capillaries *
C. of the capillary basement membrane is a continuous *
D. separating neurons from the blood and tissue fluid *
E. includes lemmocytes
F. contains macrophages
G. includes perivascular space
H. includes ependymal cells

1937. Stimulating pulses are delivered to the cells of the cerebellar Purkinje through :
A. fiber spread moss family*
B. lianoformis fiber spinal cerebellar path*

C. cells grain *
D. lianoformis fiber vestibular cerebellar path*
E. basket cells
F. stellate cells
G. cell Golgi type 1
H. 2 type cells Golgi

1938. In the granular layer of the cerebellar cortex are distinguished:
A. cells grain*
B. stellate cells Golgi type 1*
C. fusiform cells *
D. stellate cells Golgi type 2*
E. basket cells
F. ganglion cells
G. bipolar cells
H. beam cells

1939. Morphological features of the parasympathetic nervous system :
A. short postganglionic fibers *
B. disposed ganglia in organs or near *
C. to the core centers are III, VII, IX, X and autonomic nuclei lumbosacralspinal cord *
D. long preganglionic fibers *
E. long postganglionic fibers
F. centers located in the central part of the spinal cord
G. includes a lateral intermediate nucleus of the spinal cord
H. short preganglionic fibers

1940. In the uvea distinguish the following layers :
A. vascular plate *
B. supravascular plate *
C. the capillary vascular layer *
D. basal complex *
E. pigment layer
F. a layer of flat cells
G. the basement membrane
H. limiting membrane

1941. The photoreceptor cells take up the following layers of the retina :
A. an outer granular*
B. outer screen *
C. a layer of rods and cones *
D. the outer boundary layer *
E. inner granular
F. internal mesh
G. nerve fiber layer
H. ganglion

1942. The lens:
A. consists of lens fiber *
B. is surrounded by a transparent capsule *
C. lens fibers contain protein crystalline *
D. formed epithelial tissue*

E. in the lens fibers have a core of
F. contains capillaries
G. consists of cubic epithelial
H. develops from prechordal plate

1943. Eustachian (auditory) tube:
A. is lined with multirow ciliated epithelium*
B. on the surface of epithelial mucus *
C. regulates the pressure in the middle ear *
D. connects the tympanic cavity with the nasopharynx*
E. is lined with multilayered cuboidal epithelium
F. connects the middle and inner ear
G. has a muscle
H. has a cartilage shell

1944. The lacrimal glands :
A. formed of several groups glands *
B. at the complex structure of the alveolar tubular *
C. by the nature of the secret serous *
D. in the composition of lysozyme has a secret *
E. on the structure of simple alveolar branched
F. the secret of a purely mucosal
G. the secret stands in the inner corner of the eye
H. develop from the mesenchyme

1945. The structure of Corti (spiral) of the body :
A. consists of sensory and supporting cells *
B. between the inner and outer cells of the tunnel of Corti is located *
C. sensory cells lie on the phalanx cells *
D. on the apical surface of the sensory cells are stereocilia*
E. sensory cells are neural tissue
F. sensory cells are located between the support
G. Corti tunnel formed phalanx cells
H. supporting cells are connective tissue

1946. In the anterior part of the pituitary gland :
A. are the most numerous cells – chromophobe*
B. distinguish acidophilus and basophil cells *
C. endocrine cells form a branched strands *
D. has capillaries sinusoidal type *
E. are the most numerous cells acidophilus
F. cortikotrop cells are located on the periphery
G. chromophilic cells form follicles
H. thyrotropic cells contain the largest granules

1947. Specify true of the adrenal medulla :
A. endocrine cells of origin are nervous *
B. is characterized by the presence of venous sinuses *
C. in addition to endocrine cells found typical neurons *
D. of developing ganglion plate *
E. function regulated by adrenocorticotropic hormone
F. bright cells secrete norepinephrine

G. dark cells secrete epinephrine
H. endocrinocytes are epithelial tissue

1948. Choose the correct answers in relation to the thyroid gland :
A. thyrocytes form follicles *
B. are parafollicular cells *
C. into the lumen of the follicles is allocated thyroglobulin*
D. parafollicular cells produce calcitonin *
E. endocrinocytes arranged in trabeculae
F. of hormone independent of pituitary
G. thyrocytes secrete calcitonin
H. thyrocytes in the wall of the follicle form the several layers

1949. Enter the correct answers in relation to the epiphysis:
A. is divided into segments *
B. endocrine cells are pinealocytes *
C. into the peripheral parts of the lobules are located gliocytes*
D. to produce serotonine, melatonine, antigonadotropiny *
E. pinealocytes are mostly on the periphery of the lobules
F. produces vasopressin
G. is the trabecular structure
H. pinealocytes are epithelial tissue

1950. Adrenal distinguished:
A. twostream zone *
B. glomerular area *
C. mesh zone *
D. medulla *
E. marginal zone
F. granular zone
G. follicles
H. chromophobe zone

1951. Find the incorrect answers in relation to the adenohypophysis:
A. develops from endoderm *
B. includes a rear share *
C. operatively associated with the front part of the hypothalamus *
D. endocrine cells are of neural origin *
E. develops from the epithelium of the mouth of the bay
F. the endocrine cells of epithelial origin
G. includes a front share
H. contains cells chromophilic

1952. The inner shell of the aorta include:
A. endothelium*
B. basal membrane *
C. subendothelial layer *
D. plexus of elastic fibers *
E. inner elastic membrane
F. fenestrated elastic membrane
G. the muscular layer
H. bundles of collagen fibers

1953. Which bodies are sinusoidal capillaries of the type ?
A. red bone marrow *
B. liver *
C. adenohypophysis *
D. adrenal medulla *
E. the small intestine
F. the thymus
G. kidney
H. bladder

1954. Specify the endocardial layers :
A. endothelial *
B. podendotelial*
C. musculoelastic *
D. connective tissue *
E. the layer of striated fibers
F. elastic
G. cardiovascular
H. adventive

1955. Avilable elastic arteries :
A. plexus of elastic fibers instead of internal elastic membrane *
B. the predominance of elastic fibers of the muscle *
C. in the middle of the shell are fenestrated elastic membrane*
D. subendothelial layer found in smooth myocytes *
E. not a lot of smooth muscle cells and elastic fibers
F. a large number of collagen fiber
G. presence of smooth muscle cells in the outer shell
H. lack subendothelial

1956. The components of the blood thymic barrier are:
A. epitelioretikulocytes *
B. endothelium hemocapillars *
C. the basal membrane of the endothelium *
D. the basal membrane of the epitelioreticulocytes *
E. B cells
F. plasmocytes
G. basophils
H. reticular cells

1957. The structure of the cortex of lymphatic node includes:
A. lymphoid follicles *
B. trabeculae *
C. lymph sinuses *
D. reticulum *
E. brain cords
F. the mantle zone
G. marginal zone
H. venous sinuses

1958. In the white pulp of the spleen are 4 areas:

A. periarterial*
B. marginal *
C. mantle *
D. germinal center*
E. around node vagina
F. pulp cords
G. brain
H. subcapsular sinuses

1959. The spleen is carried out:
A. the deposit of blood *
B. recycling of old red blood cells *
C. the plasma cells *
D. the formation of Blymphocytes *
E. lymph cleansing
F. the deposit of blood in the veins of the trabecular
G. the output of blood from the central artery of the stroma
H. universal adult hematopoiesis

1960. Find the correct answers on macrophages:
I. capable of movement *
J. in the cytoplasm of numerous lysosomal *
K. have different shapes *
L. expressed phagocytic activity *
M. contain specific granules
N. lobed nucleus
O. in the cytoplasm of a lot of mitochondria
P. are rounded

1961. Structure ciliary body:
A. is the basis of the ciliary muscle *
B. ciliary muscle consists of bundles of smooth muscle cells*
C. attached to the ciliary processes fiber zonule of zinn *
D. from the outside is covered with a single layer of pigmented epitheliumcubic *
E. beteen the beams cells of loose connective tissue with pigment cells *
F. basis is a dense connective tissue
G. does not contain a pigment cells
H. in the composition has elastic cartilage
I. from the outside is covered with a single layer of squamous epithelium
J. is derived from the fibrous sheath

1962. The layers of the iris :
A. anterior epithelium *
B. the outer boundary *
C. vascular *
D. rear pigment epithelium *
E. inner border *
F. basal
G. net
H. front pigmentosa
I. overvascular
J. papillary

1963. Taste buds :
A. located in the epithelium of tongue papillae *
B. receptor in their structure , support and basal cells *
C. receptor cells are epiteliosensor *
D. on the top there is a time to taste *
E. on the apical surface of the sensory cells are microvilli*
F. receptor cells are neural tissue
G. are located under the supporting cells receptor
H. on the surface of the supporting cells are cilia
I. sensory cells are not updated
J. on the apical surface of numerous cilia

1964. Chromophilic anterior hypophysis cells include:
A. somatotropic*
B. mammotrope *
C. gonadotropic *
D. corticotrope*
E. thyrotropic *
F. paratireocyte
G. chromophobe
H. lyuteotropocyte
I. lipotropic
J. stellate

1965. Parathyroid:
A. has a connective tissue sheath *
B. endocrine cells form bands or islands*
C. among endocrine cells distinguish between main and oxyphilic cells *
D. its functional activity is not dependent on the hypophysis *
E. oxyphilic cells in numerous mitochondria *
F. the endothelial cells are in the form of glomeruli
G. hormone parathyrin produce mainly oxyphilic cells
H. on its activity affect thyrotropic cells of the hypophysis gland
I. endocrine cells are neurosecretory
J. between the endocrine cells, or contact the dense type of nexus

1966. Specify glands which their function depends on the hypophysis:
A. testis *
B. thyroid *
C. adrenal cortex *
D. ovary*
E. milk *
F. parathyroid
G. the adrenal medulla
H. sweat
I. the salivary glands
J. thymus

1967. Parafollicular endocrinocytes in the thyroid gland :
A. located in the wall of follicles *
B. located between the follicles *

C. are found in the interlobular septa*
D. produce calcitonin *
E. contain osmiophil pellets *
F. located between the basement membrane and thyrocyte
G. into these poorly developed granular EPS and Golgi complex
H. secretion in isolated follicles cavity
I. located in the wall of blood vessels
J. along with follicular cells absorb iodine

1968. Beam zone of the adrenal cortex :
A. produces glucocorticoid hormones *
B. endocrinocytes arranged in a radial strands *
C. in a welldeveloped endocrine cells of the smooth EPR *
D. in the endocrine cells mitochondria with tubular cristae
E. cells contain numerous lipid inclusions *
F. endocrine cells starshaped
G. does not depend on the hypophysis
H. form a network endocrinocytes
I. produces adrenaline
J. in the cells of a welldeveloped rough EPR

1969. Chromophobe cells of the adenohypophysis :
A. the most numerous *
B. make up 60 % of all endocrine*
C. not contain secretory granules *
D. involved in the regeneration of the adenohypophysis *
E. adenocytes include varying degrees of differentiation*
F. accounted for 20 % of all adenocytes
G. intensely stained
H. are undifferentiated
I. belong to neural tissue
J. located in small islands

1970. In the wall of the inferior vena cava :
A. most developed muscular elements in the outer shell *
B. no. of valves *
C. poorly developed tunica *
D. are formed transverse wrinkles *
E. longitudinal bundles of smooth muscle cells in the intima *
F. has valves
G. circular smooth muscle cells in the outer shell
H. a lot of elastic fibers
I. have smooth muscle cells in the intima
J. nibolee developed muscular elements in the middle of the shell

1971. Epicardium :
A. is formed by a plate of connective tissue*
B. is covered mesothelium *
C. has a surface layer of collagen fibers *
D. half the thickness of the epicardium of a deep collagen elastic layer *
E. a layer of elastic fibers *
F. is formed only collagen fibers

G. is covered with endothelium
H. epicardium firmly adherent to the pericardium
I. is covered by a singlelayered prismatic epithelium
J. contains numerous reticular fibers

1972. Intercalated disks between cardiomyocytes :
A. have slit contacts *
B. have desmosomes *
C. have a stepped form *
D. comprise interdigitation *
E. provides functional unity cardiomyocytes*
F. comprise synapses
G. form a tight junctions
H. form the make contacts
I. have simple contacts
J. provides full functionality of the isolation of individual cardiomyocytes

1973. Atrio ventricular Cells node of the heart :
A. mainly transient *
B. some cells contain a T tube *
C. elongated *
D. between them are simple contacts *
E. are more developed compared to the myofibrils peysmekker cells *
F. contain numerous mitochondria,
G. have large dimensions
H. is well developed granular EPR
I. join close contact
J. connected synaptic contacts

1974. Antigen lymphocyte proliferation and differentiation occurs in :
A. lymph nodes *
B. intestinal lymphoid nodules *
C. Peyer's patches *
D. spleen *
E. the tonsils *
F. liver
G. red bone marrow
H. the adrenal glands
I. the thymus
J. yellow marrow

1975. Layered Hassall's corpuscles in the thymus :
A. formed epitelioretikulyar cells *
B. epitelioretikulocytes contain vacuoles *
C. the number increases with age*
D. granules contain keratin *
E. are found in the medulla*
F. is concentric layering of reticulocytes
G. consist of endothelial cells
H. composed of fibroblasts and collagen fiber
I. consist of thymocytes
J. are in the cortex

1976. In the lymph system of the lymph node are differed:
A. cerebral sinus *
B. around node sinuses *
C. marginal sinuses *
D. bringing the lymphatic vessels *
E. efferent lymph vessel *
F. paracortical sine
G. venous sinus
H. lymph vagina
I. between node sine
J. node sine

1977. The compounds of the white pulp of the spleen are :
A. lymphoid nodules *
B. periarterial vagina *
C. T lymphocytes*
D. B cells *
E. macrophages *
F. venous sinuses
G. the gland arterioles
H. trabeculae
I. trabecular vessels
J. smooth muscle cells

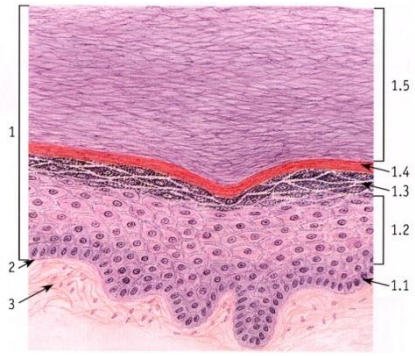
1978. In the red pulp of the spleen are :
A. reticulum *
B. pulp strands *
C. venous sinuses *
D. red blood cells *
E. trabeculae *
F. lymphoid follicles
G. germinal center
H. mantle area
I. marginal zone
J. numerous collagen fibers

1979. The components of aero hematic barrier :
A. the capillary endothelium of the blood *
B. capillary basement mebrana *
C. alveolocytes type I *
D. surfactant *
E. basal membrane of the alveoli *
F. the brush cage
G. Clara cells
H. of type II alveolocytes
I. ciliated cells
J. beams SMC

1980. Interalveolar septum of liver consists of:
A. macrophages *
B. blood capillaries *

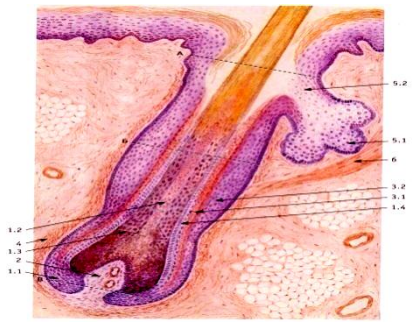
C. elastic fibers *
D. thin collagen fibers *
E. fibroblasts *
F. heavy connective tissue
G. thick collagen fibers
H. smooth muscle cells
I. arteries
J. reticular cells

1981. The figure of the skin under a digit designated the granular layer of the epidermis:



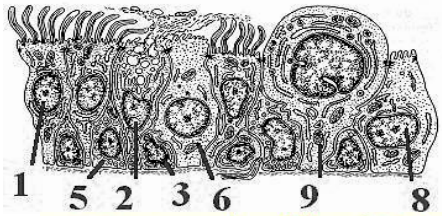
A. 1.3*
B. 1.5
C. 1.2
D. 1.4
E. 1.1

1982. The photomicrograph hair root, marked by number medulla?



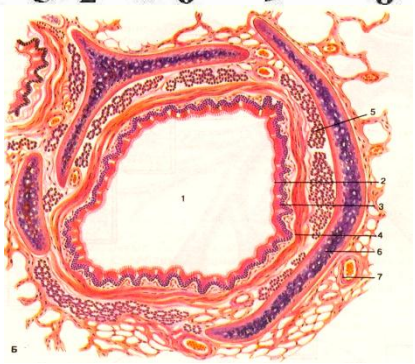
A. 1.2*
B. 5.1
C. 1.3
D. 2
E. 5.2

1983. In part of the trachea multilayer epithelium get secretory cells Clara:



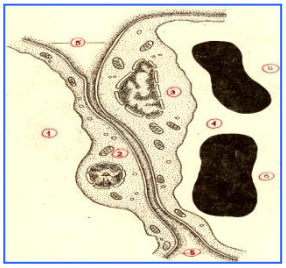
A. 9*
B. 1
C. 2
D. 3
E. 4

1984. What bronchus listed below:



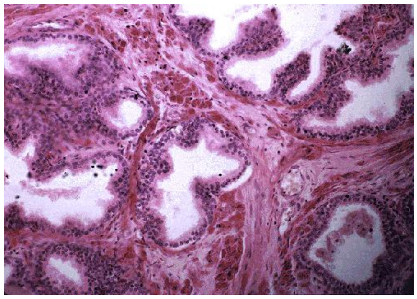
A. bronchus caliber*
B. bronchi medium caliber
C. bronchus small caliber
D. terminal bronchioles
E. respiratory bronchioles

1985. Which structure is shown in the scheme blood barrier under the number 3:



A. endothelial cell *
B. alveolotsit first type
C. basal membrane
D. erythrocytes
E. cavity of the alveoli

1986. What body is represented in the photomicrograph?

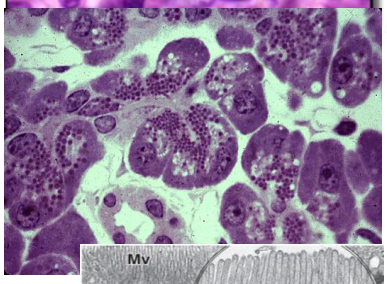


A. testis
B. prostatitis *
C. thyroid
D. breast
E. epididymis

1987. What body is represented in the photomicrograph, and what structures are indicated by the numbers 1 and 2?

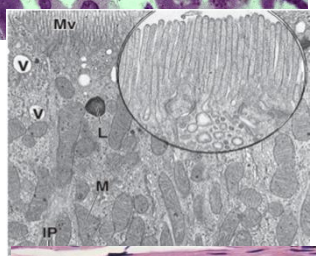
A. small intestine, brush border1, Goblet cells 2*
B. the small intestine, cilia1, 2goblet cells
C. stomach, brush border1, 2goblet cells
D. stomach cilia1, 2goblet cells
E. small intestine, brush border1, Paneth cells2

1988. Which body is shown in micrograph:



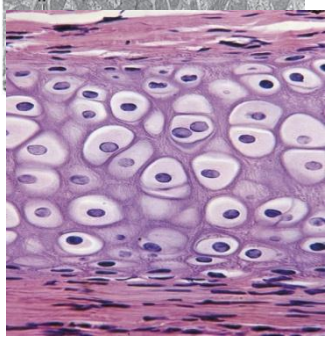
A. pancreas *
B. parotid gland
C. submandibular gland
D. sublingual salivary gland
E. breast

1989. Which of the nephron is presented on the electron:



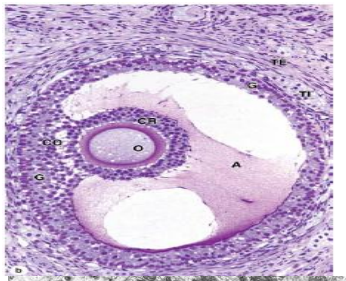
A. proximal *
B. distal
C. department of downward loop of henle
D. front ascending loop of henle
E. Bowman's capsule Shymlanskaya

1990. What is the fabric is shown in mikroftografii?



A. bone
B. heavy connective
C. hyaline cartilage*
D. fibrocartilage
E. elastic cartilage

1991. What is the structure of the cortex of the ovary is shown in micrograph?



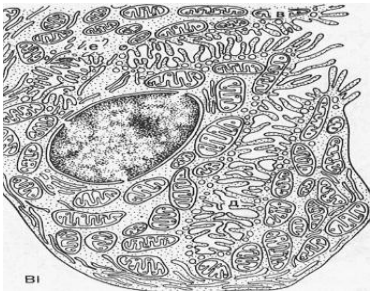
A. mature follicle *
B. primary follicle
C. corpus albicans
D. corpus luteum
E. white body

1992. Which of the nephron is presented on the electron:

A. proximal
B. distal *
C. department of downward loop of Henle
D. front ascending loop of Henle

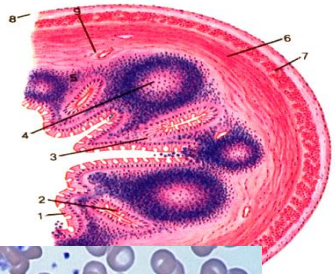
E. Bowman's capsule Shymlanskaya

1993. Driving a fundic cells / own / gastric glands is presented in the figure?



A. main
B. parietal *
C. cervical
D. endocrine
E. mucous

1994. What body is represented in the photomicrograph and what structure labeled with the number 4:



A. vermiform process, lymphoid follicles*
B. lymph node lymphoid follicles
C. spleen, white pulp
D. jejunum, Peyer's patches
E. 12 duodenal ulcer, duodenal cancer

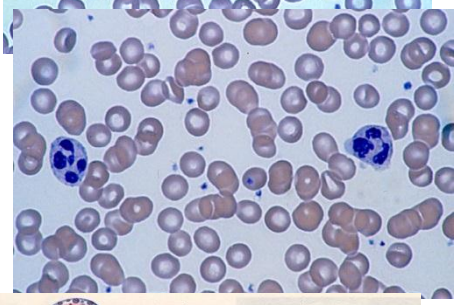
1995. What is a blood cell contains the micrograph:

A. neytrophil leukocyte
B. eosinophilic leukocyte
C. basophil *
D. lymphocyte
E. monocyte

1996. What is a blood cell contains the micrograph:

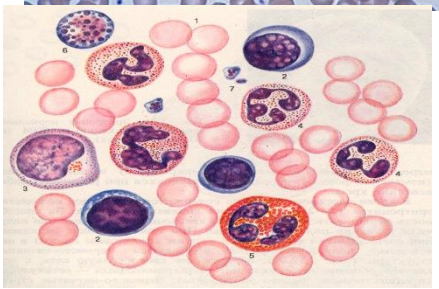
A. neytrophil leukocyte
B. eosinophilic leukocyte
C. basophil
D. lymphocyte
E. monocyte*

1997. What is a blood cell contains the micrograph:



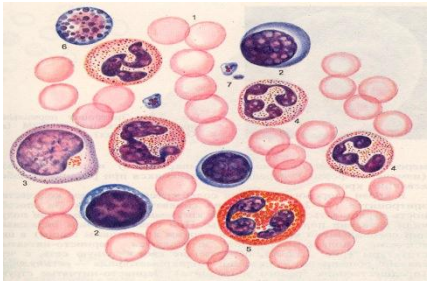
A. neytrophil leukocyte*
B. eosinophilic leukocyte
C. basophil
D. lymphocyte
E. monocyte

1998. Which number is indicated on the micrograph lymphocyte:



A. 1
B. 2
C. 3
D. 4
E. 5

1999. Which number is indicated on the micrograph eosinophilic granulocyte:



A. 1

B. 2
C. 3
D. 4
E. 5*

2000. Which organ of the endocrine system is shown in micrograph and what structure is indicated by the arrow:

A. anterior pituitary, the follicle
B. neurohypophysis, calf Gerringa
C. thyroid gland, follicle *
D. parathyroid gland, follicle
E. adrenal gland, net area