

**CALENDAR PRACTICAL CLASSES
ON HISTOLOGY, CYTOLOGY AND EMBRYOLOGY FOR STUDENTS
2 COURSES OF MEDICAL, MEDICAL - PEDAGOGICAL
MEDICAL- PROPHYLACTIC AND MEDICAL BIOLOGY FACULTY .**

LESSON NUMBER 1

Skin and its derivatives.

Control questions:

1. Features of the structure and functions of various cells of the epidermis.
2. What is the development of the dermis?
3. Tell about the peculiarities of the structure of the papillary and reticular layers of the dermis. What features of the structure make it possible to distinguish the mesh and papillary layers of the dermis from each other?
4. Features of the structure and function of the merocrine and apocrine sweat glands of the skin.
5. Features of the structure of the hair root.

Compulsory literature:

1. Afanasyev Yu.I. Histology, 1989

Additional literature:

1. Hem A., Cormack D.,

Contents of the lesson:

Micro-preparations for self-study:

Preparation of human skin.

Preparation of root for hair

LESSON NUMBER 2

Respiratory system.

Control questions:

1. Respiratory system. General morphological and functional characteristics . Airways . Structure and function of the trachea and bronchi of various calibers .
2. Sources of development. Total morpho - functional characteristics . Pulmonary acinus . The structure of the walls of the alveoli . Air- blood barrier. Features of the blood supply to the lung. Age-related changes .

Contents of exercises:

The slides for self-study :

Preparation trachea number 1 , p . 327 , Fig. 448 , p . 433 , ris.499 .

The drug is number 2 slight p. 329. Fig. 460 , pp . 330. Fig . 451. Page . 437 , Fig. 503 .

LESSON NUMBER 3

Digestive system. Oral cavity

Control questions:

1. The general plan of the building wall of the alimentary canal. Oral cavity. Development. General characteristics of the mucosa.
2. Teeth. Their development and structure. Age-related changes.
3. Language gums.
4. Salivary glands, their classification. Development and construction.
5. lymphoepithelial pharyngeal ring. The structure of the tonsils. Their importance in the defense reactions. Age-related changes.
6. Salivary glands , their classification . Development and construction.
7. lymphoepithelial pharyngeal ring. The structure of the tonsils. Their importance in the defense reactions . Age-related changes .

Contents of exercises:

1. Early stage of tooth development
2. Late stage of tooth development
3. Thread-like buds
4. The leaf- buds

Preparations for self-study:

1. Development of the tooth / Bookmark stage tooth germ / s.268, ris.367, s..368. ris.430
2. Development of the tooth / differentiation stage tooth germ /s.270 ,. ris.370 p.369 ris.431
3. Filamentous and leaf buds of tongue , s.276 , fig. 380 -a , ris.435-1 s.364 and s.366 ris.426 2 and 427 s.366 ris.421 .
4. Parotid gland , s.279 , ris.385 , s.376 , ris.438 .
5. Submandibular gland s.282 , ris.389 , str.378 Fig. 448

LESSON NUMBER 4

Digestive system (continued).

Esophagus and stomach .

Control questions:

1. Features of the mucous membrane of the digestive tract in various departments . The concept of endocrine digestive apparatus of intestinal tract.

Esophagus . Transition of the esophagus to the stomach.

2. Stomach . General morphological and functional characteristics . Sources of development. The structural features of the various

departments . Structure and histophysiology gastric glands . Age-related changes .

Preparations for self-study :

1. Esophagus . Cross srez.S.283 , ris.392 , s.379 ris.447 .
2. The transition of the esophagus into the stomach .
4. The bottom of the stomach , p.284 , ris.394 , s.382 s.383 ris.445 ris.444
5. pyloric part of the stomach , p.297 , ris.404 , s.390 s.391 ris.454 , ris.455

LESSON NUMBER 5

Digestive system (continued).

Small intestine and colon.

Control questions:

1. The small intestine. Sources of development, structure and function. Features of the structure of various parts of the small intestine. Histophysiology system crypt-villus and its participation in the recessed, parietal and intracellular digestion. Features microcirculation. Age-related changes.
2. Colon. Appendix. The sources of their development, structure and function. Lymphoid tissue of the intestine, its structure and meaning. Features microcirculation.

Preparations for self-study :

1. The small intestine , p.299 , ris.408 , s.395 , ris.459 .
2. 12 - pesrtnaya intestine, p.292 , ris.456 .
3. Colon , s.306 , ris.418 , s.404 , ris.468 - a and b .

LESSON NUMBER 6

Digestive system (continued).

Liver and pancreas system.

Control questions:

1. Pancreas. Sources and the course of development, structure. Histochemical characteristics and histophysiology endo - and exocrine glands.
2. Liver. Source development. Features of the structure and circulation. The structure of the hepatic lobule. Histochemical characteristics and histophysiology hepatocytes. Age features. The gallbladder, its structure and meaning.

Preparations for self-study:

1. Pancreas, s.308, ris.422, s.408, ris.471.
2. Liver p. 317, Fig. 435, p. 412, Fig. 478, p. 413, Fig. 479.

LESSON NUMBER 7.

Excretory system

Control questions:

1. Kidney. Sources of development and blood supply. Histophysiology its various departments. Juxtaglomerular complex. Age features.
2. Kidneys. Structure and function of cortical nephrons and okolomozgovye. Features yukstamedulyarnogo circulation.
3. urinary tract. Morpho-functional characteristics. The development, structure, function.

The slides for self-study:

1. Kidney. Hematoxylin - eosin, str.449. Fig. 517.str.352. Fig. 478.
2. Preparation of the ureter. Hematoxylin - eosin , str.356 . Fig.
3. Urinary bladder. Hematoxylin - eosin . Str.462 .

LESSON NUMBER 8.

Male reproductive system .

Control questions:

1. Testicles / testis / epididymis and . Their development and structure
1. The age-related changes . Spermatogenesis and endocrine system .
2. Prostata . Their structure and functions. Age-related changes .

Preparations for self-study:

1. Testes. Painting gematoksilinom- eosin.
2. The preparation of the prostate.

LESSON 9.

Female reproductive system.

Control questions:

1. The ovaries. Their development, structure, age-related changes. Ovogenesis. The ovaries as organs of internal secretion. 2.Cyclical changes in the ovaries during puberty the body.
3. Uterus. Oviduct. Vagina. Their development, structure, cyclical changes in them and the normal regulation.
1. Mammary gland. The development, structure and function. Age-related changes.
2. Histophysiology ovarialno - menstrual cycle.

Preparations for self-study:

1. Ovary .
2. The uterus post menstrual period.
3. Uterus during the premenstrual period .
4. Mammary glands. p. 394 , Fig. 539 , p . 357, Fig. 418 .

LESSON 10 .

Bases human embryology. Progenez. Fertilization. Crushing. Gastrulation.

Control questions:

1. Embryonic development rights.
2. The sex cells , fertilization , crushing .
3. Gastrulation and education extraembryonic organs.

Preparations for self-study:

1. Spermatozoid
2. Oocyte

LESSON NUMBER 11

Bases embryology (continued).

Provisory organs

Control questions:

1. extraembryonic organs /yolk sac, placenta/.
2. The system of the mother -fetus .

Preparations for self-study:

1. The parent of the placenta
2. Fetal part of the placenta

LESSON 12.

Nervous system. The spinal cord and spinal ganglion.

Control questions:

1. Spinal ganglia , localization , structure and communication.
2. Spinal cord. The development , structure and function . Own spinal apparatus .

Preparations for self-study:

1. Spinal ganglia.
2. Spinal cord.

LESSON №13 (continued).

Nervous system.

The brain is the cerebellum.

Control questions:

1. The structure of the brain stem .
2. The cerebellum , the structure of its value
3. The cerebral cortex of the brain. Structure and function . The concept of cyto- and mieloarhitektonika crust. Age-related changes .
4. Vegetative or autonomic nervous system .

Preparations for self-study:

The cerebral cortex of man

4. Cerebellum.
5. The autonomic nervous plexus .

LESSON №14

Sensory organs. The organ of vision.

Control questions:

1. Organy feelings, their classification. The concept of analyzers and their major departments. Morphofunctional characteristic of the receptor apparatus .
2. Organy view. Source development. Structure . Gistofiziologicheskaya characteristic of photoreceptor cells . Age-related changes of eye.

Contents of exercises:

1. Rear wall of the eye - the retina .
2. Cornea.

LESSON №15

The sense organs (continued). The organ of hearing and balance

Control questions:

1. Organy hearing and balance . Sources of development, structure and functional significance . The structure of the receptor departments .
Cytophysiology reception.
2. Vozrastnye changes.
3. Organy taste and smell.

Contents of exercises:

1. Aksial slice snails - the organ of hearing