Credit questions for the 2nd semester in Histology, Cytology, Embryology for the first year students of Medical Faculty for International Students (specialty "Dentistry") (утверждены на заседании кафедры от 20.11.2025, протокол №4)

1. Organ as the level of organization of multicellular organisms. Types of organs. The concept of the structural and functional units of the body.
2. Morphofunctional characteristics of blood vessels: classification, sources of development, the general plan of the structure of their wall.
3. Arteries: classification, microscopic structure, relationships between structure of arterial wall and hemodynamic conditions.
4. Microvasculature: morphofunctional characteristics. Capillaries: classification, microscopic structure, regeneration. Arteriolovenular anastomoses.
5. Veins: classification, microscopic structure, relationships between structure of their wall and hemodynamic conditions.
6. The lymph vascular system: sources of development, structure and functions of lymphatic capillaries.
7. Heart: sources of development, general morphofunctional characteristics.
8. Cardiac conduction system: nodes and bundles, their topography, cellular composition and functional significance.
9. Red bone marrow: structure, function, topography. Characteristics of postembryonic hematopoiesis in bone marrow. Interaction between stromal and hematopoietic cells.
10. Thymus: topography, sources of development, structure, functions. Interaction between epithelial, stromal and hematopoietic cells. Endocrine function of the thymus. Thymic involution.
11. Spleen: sources of development, microscopic structure and functions. Blood supply, embryonic and postembryonic hematopoiesis.
12. Lymph nodes: sources of development, microscopic structure and functions.
13. Lymphoepithelial ring of pharynx. Tonsils: functions, sources of development, microscopic structure. Structure of lingual tonsil. Lymphoid nodules of mucous membranes.
14. Nervous system: general morphofunctional characteristics, classification. The peripheral nervous system. Nerve, its structure, regeneration. Spinal ganglion.
15. Spinal cord: morphofunctional characteristic, microscopic structure of grey and white matter.
16. Brain: cytoarchitectonics and mieloarchitectonics of the cerebral cortex. The concept of the bloodbrain and blood-cerebrospinal fluid barriers. Meninges.
17. Cerebellum: structure and functional characteristic. Neuronal elements of cerebellar cortex. Interneuronal communications.
18. Autonomic division of peripheral nervous system: structure and functions. Structural components of the autonomic reflex arcs. Microscopic structure of the autonomic ganglia.
19. Senses: general morphofunctional characteristic. The inner ear. Microscopic structure of organ of hearing and balance.
20. Organ of vision. Microscopic structure of fibrous, vascular tunics and retina.
21. Morphofunctional characteristics of the endocrine system. Classification of the endocrine organs. Central and peripheral endocrine glands. Diffuse endocrine system: localization, functions, sources of development.

22. Hypothalamo-hypophyseal system. Hypothalamus, morphofunctional characteristics. Neurosecretory neurons.
23. Pituitary gland: general morphofunctional characteristic, microscopic structure of adenohypophysis and neurohypophysis.
24. Thyroid and parathyroid glands: functional significance, sources of development, the microscopic structure.
25. Adrenal glands: general morphofunctional characteristics. Histophysiology of adrenal cortex and medulla.
26. Cheek: structure of buccal mucosa, buccal glands.
27. Structural organization of the oral mucosa and its morphofunctional features. Minor salivary glands. Age-related changes.
28. Hard and soft palate: sources of development, functions, structure of the mucosa.
29. Tongue: functions, sources of development. Topographic features of the structure. Taste bud structure. Aging of tongue mucosa.
30. Gingiva: free and attached parts and their histology, gingival sulcus and gingival crevicular fluid. Age-related changes of dento-gingival junction.
31. The overall plan of the structure of the digestive tube wall. Esophagus: functions, microscopic structure of the wall.
32. Stomach: functions and microscopic structure of the wall. Histophysiology of the gastric glands.
33. Small intestine: microscopic structure of the wall. Histophysiology of crypt-villus system.
34. Large intestine: functions and microscopic structure of the wall. Appendix.
35. Liver: function, structure, blood supply. The structure of hepatic lobules. Liver regeneration.
36. Microscopic structure of the wall of gallbladder.
37. Pancreas: microscopic structure, functional value of the exocrine and endocrine portions.
38. Respiratory system: morphofunctional characteristics, respiratory and non-respiratory functions. Histophysiology of respiratory passages. Microscopic structure of the olfactory organ.
39. Respiratory passages. Microscopic structure of the larynx, trachea, bronchi, bronchioles, terminal bronchioles.
40. Lungs: histophysiology of respiratory portion. Air-blood barrier. Role of surfactant.
41. Skin: sources of development, the microscopic structure. Process of keratinization and physiological regeneration of the epidermis. Skin derivatives. Skin glands, their morphofunctional characteristics. Skin receptors.
42. Urinary system: morphofunctional characteristics. Kidney: sources of development, structure (cortex and medulla). Renal corpuscle. Filtration barrier. The nephron as the structural and functional unit of the kidney. Types of nephrons. Blood supply.
43. Histophysiology of the nephron. Endocrine function of kidney. Ureter, urinary bladder, urethra.
44. Male reproductive system. Morphofunctional characteristics of testis. Spermatogenesis. The bloodtestis barrier. Excretory genital ducts and accessory genital glands.
45. Female reproductive system. Microscopic structure of the ovary and uterus. Hormonal regulation of cyclical changes in the ovary and uterus.

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