

## **DENTAL MEDICINE**

### **Histology and embryology – questions**

#### **I.**

- 1. General structure of the cell, its size and shape. The structure of the cell membrane.**
- 2. Nucleus, nuclear envelope, chromatin, function of the nucleus.**
- 3. Nucleolus, LM and EM structure.**
- 4. Mitochondria, LM and EM structure, function.**
- 5. Lysosomes and peroxisomes.**
- 6. Endoplasmic reticulum - rough (granular) and smooth.  
Ribosomes.**
- 7. Golgi complex, LM and EM structure, function.**
- 8. Centriole, LM and EM structure, function.**
- 9. Microtubules, microfilaments and intermediate filaments.**
- 10. The ultrastructural and molecular structure of cell membrane.**
- 11. Covering epithelial tissue, classification, structure and function**
- 12. Glandular epithelial tissue, classification, structure and function.**
- 13. Basement membrane, ultrastructure, function.**
- 14. Intercellular junctions. Specialization of apical surface of cells.**
- 15. Connective tissue cells.**
- 16. Fixed connective tissue cells.**
- 17. Free connective tissue cells.**
- 18. Intercellular ground substance of connective tissue.**
- 19. Collagen, elastic and reticular fibers.**
- 20. Types of connective tissue.**
- 21. Connective tissue proper.**
- 22. Connective tissue with special function.**
- 23. Types of cartilage.**
- 24. Microscopic structure of bone tissue.**
- 25. Bone cells.**

- 26. Compact and spongy bone.**
- 27. Endochondral ossification.**
- 28. Intramembranous and endochondral ossification.**
- 29. Blood cells.**
- 30. Erythrocytes.**
- 31. Leukocytes.**
- 32. Granulocytes.**
- 33. Agranulocytes and platelets.**
- 34. Maturation of erythrocytes.**
- 35. Skeletal muscle tissue.**
- 36. Sarcoplasmic reticulum and mechanism of contraction.**
- 37. Cardiac muscle tissue.**
- 38. Smooth muscle tissue.**
- 39. Neurons.**
- 40. Dendrites and axon.**
- 41. Synapses.**
- 42. Neuroglia.**
- 43. Myelinated nerve fibers.**
- 44. Preparation of tissues for light microscopic examination.**
- 45. Fixation and embedding.**
- 46. Staining methods.**
- 47. The principle of transmission electron microscopy.**

## **II.**

- 1. Structure and function of hypophysis.**
- 2. Structure and function of thyroid gland.**
- 3. Structure and function of parathyroid glands.**
- 4. LM and EM structure of adenohypophysis.**
- 5. Microscopic structure of uterus.**
- 6. Structure and function of placenta.**
- 7. Structure and function of skin.**
- 8. Glands of the skin, hairs and nails.**
- 9. Microscopic structure of cerebellum.**
- 10. Microscopic structure of isocortex.**
- 11. Microscopic structure of spinal cord.**
- 12. Fibrous layer of the eye.**
- 13. Vascular layer of the eye.**
- 14. Retina.**
- 15. External and middle ear.**
- 16. Internal ear – organ of Corti.**
- 17. Dorsal root ganglia and meninges.**
- 18. Microscopic structure of capillaries.**
- 19. General structure of blood vessels.**
- 20. Elastic and muscular arteries.**
- 21. Structure and function of lymph nodes.**
- 22. Structure and function of thymus.**
- 23. Larynx and trachea.**
- 24. Structure of bronchi and bronchioles.**
- 25. Respiratory portion of lungs.**
- 26. Microscopic structure of the oral cavity.**
- 27. Microscopic structure of the tongue.**
- 28. Microscopic structure of the teeth.**
- 29. Microscopic structure of salivary glands.**
- 30. General structure of the digestive tract.**

### **III.**

- 1. Spermiogenesis. Oogenesis.**
- 2. Fertilization, cleavage of the zygote and development of the blastocyst.**
- 3. Implantation and differentiation of the decidua.**
- 4. Formation of the two – layered plate – the embryonic disc.**
- 5. Formation of the intraembryonic mesoderm.**
- 6. Development of notochord.**
- 7. Development of neural tube, histogenesis.**
- 8. Development of brain vesicles.**
- 9. Germ layer derivatives. Differentiation of ectoderm.**
- 10. Development of the external form of the embryo.**
- 11. Development of the placenta and umbilical cord.**
- 12. Development and derivatives of the pharyngeal pouches.**
- 13. Development of the branchial arches.**
- 14. Development of the branchial apparatus.**
- 15. Development of the tongue.**
- 16. Development of the teeth.**
- 17. The primitive circulation.**
- 18. Prenatal and postnatal circulation.**
- 19. Heart development and malformations of the heart and great vessels.**
- 20. Development of the face and neck. Congenital anomalies.**
- 21. Development of nasal cavities.**
- 22. Development of oral cavity.**
- 23. Development of the palate.**
- 24. Development of salivary glands.**
- 25. Development of the fetal membranes – chorion, amnion and yolk sac.**
- 26. Intrauterine implantation sites, placenta praevia, multiple pregnancy.**
- 27. Development of the eye.**
- 28. Development of the ear.**
- 29. Development of the respiratory system, histogenesis of the lungs.**
- 30. Development of the skull – chondrocranium, desmocranium, viscerocranium.**