

CONTEST TOPICS
for the position of associate professor, position 15

1. General physiology. Water and fluid compartments of the body. Transport across the cell membrane. Homeostasis
2. Neuro-muscular physiology. Neuron. Properties of the neuron. Receptors. Receptor adaptation. Synapse. The mechanism of synaptic functioning.
3. Skeletal striated muscle. Smooth muscle.
4. Energy metabolism. Nutrition.
5. Physiology of the digestive system. Digestion in the oral and gastric cavity. Salivary secretion and regulation of salivary secretion. Gastric motility. Filling and evacuating the stomach. Liver physiology. Properties and composition of the bile. Bile salts. Pancreatic and intestinal secretion. Absorption and intestinal motility. Colon physiology. Intestinal and gaseous flora. The phases of defecation. Hunger and thirst. The vomiting reflex.
6. Physiology of blood. Functions and properties of the blood. Plasma. Hematopoiesis. Erythrocyte physiology. Leukocyte physiology. Primary and secondary hemostasis. Platelet physiology. Mechanisms of blood clotting. Fibrinolysis.
7. Blood circulation. The structure of the heart. Functional properties of the myocardium. Cardiac cycle or physiological cardiac revolution. Manifestations of cardiac activity: heart sounds, apex shock. Physiology of arterial, venous and capillary circulation. Lymphatic circulation.
8. Renal excretion. Kidney functions. Glomerular filtration. Tubular reabsorption. Tubular secretion. Composition of urine. Urination and physiology of the ureters and bladder
9. Respiratory physiology. The functional role of the respiratory system. Pulmonary ventilation. Inspiration. Exhalation. Alveolar gas exchange. Transport of respiratory gases in the blood. Breathing regulation.

REFERENCES

1. Hăulică, I., Fiziologie, Ed. Medicală, 2007
2. Guyton, A.C. Fiziologie Medicală, Ed. Amaltea, 2013
3. Dorofteiu M. Fiziologie. Coordonarea echilibrului uman. Ed. Argonaut, Cluj-Napoca, 1992
4. Dorofteiu M. Fiziologie. Ed. Casa Cărții de Știință, Cluj-Napoca, 1992
5. Sembulingam K, Sembulingam P, Essentials of Medical Physiology, Fifth edition, Jaypee Brothers Medical Publishers (P) LTD, 2010
6. Rhoades R, Bell D, Physiology Principles for Clinical Physiology, Lippincott Williams & Wilkins, Third edition, 2009
7. Ganong W.F., Review of Medical Physiology, Twenty fourth edition, Appleton and Lange Comp., 2007
8. Dana Carmen Zaha, Introducere în fiziologie, Editura Universității din Oradea, 2015

Director de Departament
Sef lucrari dr. Zaha Dana Carmen