

Physiology and Pathophysiology Exam Questions 2022

1. group (BW)

1. Cell and its structure, cell proliferation and differentiation.
2. Cell membrane transport mechanisms. Proteosynthesis.
3. Control and regulatory mechanisms. Homeostasis.
4. Blood composition, general properties of blood. Function of blood elements and plasma.
5. Erythropoiesis and thrombopoiesis.
6. Hemostasis.
7. Nonspecific (innate) immunity.
8. Specific (acquired) immunity.
9. Neuron and its functions, synapse, neuromuscular plate.
10. Relations between neurons, functional manifestations of nervous system.
11. Striated muscle, control and function.
12. Smooth muscle, control and function.
13. Mechanical activity of heart (cardiac cycle, contraction, manifestations of heart activity).
14. Regulation of blood circulation (regulatory mechanisms).
15. Lung ventilation, lung volumes.
16. Diffusion and transport of respiratory gases.
17. Control and regulation of respiration.
18. Neuroendocrine control of gastrointestinal system, regulation of food intake.
19. Resorption and digestion of nutrients.
20. Intermediary metabolism (saccharides, lipids, proteins).
21. Nephron and its functions.
22. Regulation of renal excretory activity (RAA system).
23. Basic mechanisms of endocrine regulations.
24. Hypothalamo-hypophyseal system.
25. Physiology of reproduction, menstrual cycle. Gravidity.
26. Ageing theory

2. group (Green)

1. General definitions and terms (disease, health). Development and stages of disease.
2. Mechanisms of immune defences against harmful substances.
3. Stress reaction and its significance.
4. Immunity disorders.
5. Current theory of malignant transformation.
6. Pathophysiology of inflammation.
7. Damage to organism by physical factors.
8. Damage to organism by chemical and biological factors.
9. Disorders of water balance.
10. Acid-base balance disturbances.
11. Nutrition and metabolism disturbances. Obesity and starvation.
12. Genetic factors in pathogenesis.
13. Thermoregulatory disorders, fever.
14. Consciousness disorders.
15. Shock.
16. Symptoms of cardiovascular system diseases.
17. Symptoms of respiratory system diseases.
18. Symptoms of renal diseases.
19. Symptoms of gastrointestinal diseases.
20. Hypo- and hypervitaminoses.
21. Disorders of saccharide, lipid and protein metabolism.
22. The most frequent tumor diseases.
23. Infectious hepatitides, etiology, pathophysiology.
24. Alimentary infections, etiology, pathophysiology.
25. Infectious diseases of respiratory systém, TBC, COVID-19.
26. Vertically transmitted diseases, zoonoses.

3. group (Red)

1. Sleep disorders.
2. Pathophysiology of pain. Headache, migraine.
3. Anemias and hemostatic disorders.
4. Blood group system AB0 and Rh factor – significance.
5. Heart failure, pathophysiology of myocardial infarction.
6. Congenital and acquired heart defects.
7. Pathological ECG curve. Cardiac arrhythmias and conduction disturbances.
8. Pathophysiology of hypertension and hypotension.
9. Pathophysiology of lung ventilation and diffusion abnormalities. Chronic obstructive lung diseases.
10. Rheumatic diseases.
11. Epilepsy.
12. Degenerative and demyelinating CNS diseases.
13. Functional gastrointestinal disorders.
14. Hepatic function impairment, portal hypertension, ascites.
15. Cholelithiasis.
16. Exocrine pancreatic disorders.
17. Renal failure, nephrotic syndrome.
18. Urine and urine sediment examination.
19. Hypothalamic and pituitary disorders.
20. Thyroid and parathyroid gland disorders.
21. Adrenal gland disorders.
22. Diabetes mellitus.
23. Gonadal endocrine disorders.
24. Pathophysiology of connective and muscular tissue.
25. Skin lesions – division, description and examples of diseases.
26. ORL patophysiology, main diseases