

Human Physiology – Phase 1A: 2 Marks Questions (Q1–Q30 Solved)

Q1. Define blood pressure and write its normal value. (Feb 2017)

Ans 1. Blood pressure is the lateral pressure exerted by circulating blood on the walls of arteries. The normal arterial blood pressure in an adult is about 120/80 mmHg.

Q2. Define Motor Unit. (Feb 2017)

Ans 2. A motor unit consists of a single motor neuron and all the muscle fibers supplied by that neuron.

Q3. Define GFR. (Feb 2017)

Ans 3. Glomerular filtration rate is the volume of filtrate formed by both kidneys per minute. Normal GFR is approximately 125 ml/min.

Q4. Surfactant. (Feb 2017)

Ans 4. Surfactant is a phospholipid substance secreted by type II alveolar cells that reduces surface tension and prevents alveolar collapse.

Q5. Content of gastric juice. (Feb 2017)

Ans 5. Gastric juice contains hydrochloric acid, pepsinogen, mucus, intrinsic factor, and water.

Q6. Name the two excitable tissues. (Feb 2017)

Ans 6. The two excitable tissues are nerve tissue and muscle tissue.

Q7. Enumerate properties of skeletal muscle. (Feb 2017)

Ans 7. Properties of skeletal muscle include excitability, conductivity, contractility, extensibility, and elasticity.

Q8. ADH. (Feb 2017)

Ans 8. Antidiuretic hormone is secreted by posterior pituitary and regulates water reabsorption in kidneys.

Q9. Enumerate hormones of Anterior Pituitary. (Feb 2017)

Ans 9. Anterior pituitary hormones include GH, TSH, ACTH, FSH, LH, and prolactin.

Q10. Define Renal clearance. (Feb 2017)

Ans 10. Renal clearance is the volume of plasma completely cleared of a substance by kidneys per minute.

Q11. Define sarcomere. Write normal length of sarcomere. (Jan 2018)

Ans 11. Sarcomere is the structural and functional unit of myofibril. Normal length is about 2–2.2 micrometers.

Q12. Define homeostasis. Give two examples. (Jan 2018)

Ans 12. Homeostasis is maintenance of constant internal environment. Examples include regulation of body temperature and blood glucose level.

Q13. Name different organelles of a cell. (Jan 2018)

Ans 13. Cell organelles include nucleus, mitochondria, endoplasmic reticulum, Golgi apparatus, lysosomes, and ribosomes.

Q14. Write composition of blood. (Jan 2018)

Ans 14. Blood consists of plasma and formed elements including RBCs, WBCs, and platelets.

Q15. Define synapse. Write types of synapses. (Jan 2018)

Ans 15. Synapse is a junction between two neurons. Types are chemical synapse and electrical synapse.

Q16. Define receptors. Give examples. (Jan 2018)

Ans 16. Receptors are specialized sensory structures that receive stimuli. Examples are pain receptors and touch receptors.

Q17. Write functions of liver. (Jan 2018)

Ans 17. Liver functions include metabolism, bile secretion, detoxification, and storage of glycogen.

Q18. Define cardiac output. Write its normal value. (Jan 2018)

Ans 18. Cardiac output is the volume of blood pumped by heart per minute. Normal value is about 5 L/min.

Q19. What is Tidal Volume? Write its normal range. (Jan 2018)

Ans 19. Tidal volume is the amount of air inspired or expired during normal breathing. Normal value is about 500 ml.

Q20. Hormones of Adrenal Gland. (Jan 2018)

Ans 20. Adrenal gland secretes cortisol, aldosterone, adrenaline, and noradrenaline.

Q21. Define active transport. Give examples. (Apr 2018)

Ans 21. Active transport is movement of substances against concentration gradient using energy. Example: Sodium-potassium pump.

Q22. Functions of blood. (Apr 2018)

Ans 22. Blood transports gases, nutrients, hormones, and helps in regulation and protection.

Q23. Enumerate blood clotting factors. (Apr 2018)

Ans 23. Clotting factors include fibrinogen, prothrombin, thromboplastin, and calcium.

Q24. Myopia & Hypermetropia. (Apr 2018)

Ans 24. Myopia is near-sightedness while hypermetropia is far-sightedness.

Q25. Enzymes present in pancreatic juice. (Apr 2018)

Ans 25. Pancreatic juice contains trypsin, amylase, lipase, and nucleases.

Q26. Define EDEMA. (Apr 2018)

Ans 26. Edema is abnormal accumulation of fluid in interstitial spaces.

Q27. Define Apnoea and Hypoxia. (Apr 2018)

Ans 27. Apnoea is cessation of breathing while hypoxia is reduced oxygen supply to tissues.

Q28. Oxygen debt. (Apr 2018)

Ans 28. Oxygen debt is extra oxygen required after exercise to restore normal metabolic state.

Q29. Surfactant. (Apr 2018)

Ans 29. Surfactant reduces surface tension in alveoli and prevents lung collapse.

Q30. Define Contraception. Give examples. (Apr 2018)

Ans 30. Contraception refers to prevention of pregnancy. Examples include condoms and oral pills.