

PHYSIOLOGY – Paper I**QP Code: 2527****(QP contains two pages)**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

Multiple Choice Questions**10 X 1 = 10 Marks**

1. Which of the following has the highest pH?
 - A. Gastric juice
 - B. Pancreatic juice
 - C. Saliva
 - D. Colonic luminal contents
2. Compared to hepatic bile, gall bladder bile contains a reduced concentration of which of the following?
 - A. Bile acids
 - B. Sodium ions
 - C. Protons
 - D. Glucose
3. Which part of the ECG corresponds to ventricular repolarization?
 - A. The P wave
 - B. The QRS duration
 - C. The T wave
 - D. The U wave
4. Which of the following normally has a slowly depolarizing prepotential?
 - A. Sinoatrial node
 - B. Atrial muscle cells
 - C. Ventricular muscle cells
 - D. Bundle of His
5. Airway resistance
 - A. Is increased if the lungs are removed and inflated with saline
 - B. Does not affect the work of breathing
 - C. Is increased in paraplegic patients
 - D. Is increased in following bronchial smooth muscle contraction
6. Which of the following has the greatest effect on the ability of blood to transport oxygen?
 - A. Capacity of the blood to dissolve oxygen
 - B. Amount of hemoglobin in the blood
 - C. CO₂ contents of red blood cells
 - D. pH of proteins
7. On which of the following does aldosterone exert its greatest effect?
 - A. Proximal tubule
 - B. Thin portion of the loop of Henle
 - C. Thick portion of the loop of Henle
 - D. Cortical collecting duct
8. In the absence of vasopressin, the greatest fraction of filtered water is absorbed in the
 - A. Proximal tubule
 - B. Loop of Henle
 - C. Distal tubule
 - D. Cortical collecting duct
9. When the radius of the resistance vessels is increased, which of the following is increased?
 - A. Systolic blood pressure
 - B. Diastolic blood pressure
 - C. Viscosity of the blood
 - D. Capillary blood flow

10. Ribosomes in the cell synthesize
- A. Protein
 - B. Steroid hormones
 - C. Both
 - D. None of the above

Section B

LONG ESSAYS (Answer any two)

2 X 10 = 20 Marks

- 11. Describe the composition, function and regulation of salivary juice.
- 12. Describe various cardio vascular reflexes in detail and explain how they regulate heart rate.
- 13. Describe the gastro intestinal hormones in detail with their functions.

SHORT ESSAYS (Answer any ten)

10 X 5 = 50 Marks

- 14. Explain the peculiarities of coronary circulation.
- 15. Draw a normal ECG and explain how each wave is produced.
- 16. Explain the intrinsic pathway for coagulation.
- 17. Describe Rh factor and its clinical significance.
- 18. Describe the process of facilitated diffusion.
- 19. Explain the process of micturition.
- 20. Describe the changes that occur during acclimatization to high altitude.
- 21. Define deglutition. Describe the pharyngeal stage of deglutition.
- 22. Explain counter current multiplier mechanism.
- 23. Classify hypoxia. Explain any two of them.
- 24. Describe defecation reflex.
- 25. Explain the function of upper respiratory tract.

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