

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I Semester B.O.T Degree Examination – 06-May-2026**

**Time: Three Hours**

**Max. Marks: 100**

**Human Physiology – I (RS)**

**Q.P. CODE: 3412**

Your answers should be specific to the questions asked  
Draw neat, labeled diagrams wherever necessary

**LONG ESSAYS (Answer any Two)**

**2 x 10 = 20 Marks**

1. Enumerate different modes of transport across cell membrane. Describe primary active transport with an example
2. Define hypoxia. Classify hypoxias and explain the features seen in different types of hypoxia
3. Describe the mechanism of micturition. Describe the nerve supply of urinary bladder. Add a note in cystometrogram

**SHORT ESSAYS (Answer any Ten)**

**10 x 5 = 50 Marks**

4. Enumerate various stages of erythropoiesis. Add a note in maturation factors
5. Describe coronary circulation and factors influencing it
6. Give the composition, synthesis and functions of bile salts. Name the effects of bile duct obstruction
7. Explain feedback mechanisms
8. Describe the peculiarities of renal circulation. Explain the significance of any one
9. Define cardiac cycle. Explain with the help of a diagram the mechanical changes during cardiac cycle
10. What is pulmonary surfactant? Explain its role in respiration
11. Describe the mechanism of HCI secretion in the stomach with the help of a diagram
12. What are the indications of dialysis and explain how artificial kidney functions
13. Define and classify immunity. Describe the mechanism of action of antibodies
14. Define and give examples of ventilation perfusion ratio
15. Bicarbonate buffer system

**SHORT ANSWERS (Answer any Ten)**

**10 x 3 = 30 Marks**

16. Functions of skin
17. Classify lymphocytes based in function and specify their roles
18. Define stroke volume. Give its normal value
19. Artificial respiration
20. What is hypertension? What are the causes leading to secondary hypertension?
21. Exocrine functions of pancreas
22. Functions of proximal convoluted tubule
23. Functions of platelets
24. Respiratory changes during exercise
25. List the features of hypovolemic shock
26. Mention the functions of lysosomes and ribosomes
27. Gastrin

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