

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination - 21-May-2025

Time: Three Hours

Max. Marks: 100

PHYSIOLOGY

(RS-3 – B.Sc Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Neuro Sciences Technology, Anesthesia Technology, Operation Theatre Technology, Emergency and Trauma Care Technology)

(RS-4 – B.Sc Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology)
Anesthesia and Operation Theatre Technology

Q.P. CODE: 3262

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice)

2 x 10 = 20 Marks

1. Define haemostasis. With the help of a schematic diagram, explain the intrinsic mechanism of blood coagulation
2. What are the different forms of O₂ transport in the blood? Draw and label the oxygen haemoglobin dissociation curve. List the factors that cause the right shift of the curve

OR

Describe the origin, course, termination and functions of the cortico-spinal tract with a labelled diagram

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Define anaemia. Name two types of anaemia with their cause
4. Draw a spirogram to show the lung volumes and capacities
5. Draw a neat labelled diagram of a normal lead II electrocardiogram (ECG). Write the causes of each wave and mention any two uses of ECG

OR

With the labelled graph, explain the ionic basis of a nerve action potential

6. Explain the phases of regulation of secretion of gastric juice
7. Define Glomerular Filtration Rate (GFR) with its normal value. Write any two factors which influence GFR
8. Discuss the different phases of ventricular systole during cardiac cycle
9. Describe any two types of movements of small intestine and its significance
10. With the help of the diagram, explain the ovarian changes that occur during the menstrual cycle

OR

What is referred pain? Give any two examples of the same

11. What is the cause of Acromegaly? List the clinical features of the same
12. List the functions of middle ear

SHORT ANSWER (Question No 15 & 20 choice)

10 x 3 = 30 Marks

13. Compare simple diffusion and facilitated diffusion with an example for each
14. Define PCV and ESR. Write the normal values
15. What is a Sarcomere? Name the contractile proteins present in the skeletal muscle

OR

List any two cardiovascular and respiratory changes that occur during the exercise

16. State Landsteiner's law. What is the importance of knowing the blood group?
17. Define dead space in the lungs. What are the types of dead space?
18. Define the term 'renal clearance' giving its formula
19. List three functions of cerebrospinal fluid
20. Name the hormones regulating glucose level in the blood. Write the function of any one hormone

OR

Write any three differences between upper motor neuron lesion and lower motor neuron lesion

21. Add a note on pregnancy immunological test
22. Name the receptors for vision and its functions. Tabulate any three differences between them
