

Time: Three Hours

Max. Marks: 100 Marks



BIOCHEMISTRY

(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: 3263

(QP contains two pages)

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. Discuss the sources, daily requirement, biochemical functions and deficiency manifestations of vitamin A.
2. Describe the pathway of gluconeogenesis. Add a note on its regulation.

Or

What are proteins? Enumerate the functions. Discuss the classification of proteins based on chemical nature and solubility.

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. Discuss the functions and deficiency manifestations of pyridoxine.
4. Describe the reactions of β -oxidation of palmitic acid. Add a note on the energetic.
5. What are ketone bodies? Discuss the biochemical basis of ketosis in starvation and diabetes mellitus.

Or

Define peptides. How are they formed? Discuss the functions of any three biologically important peptides.

6. Discuss the biological effects of radiations. Give the applications of three radioactive isotopes in medical field.
7. Describe the common causes and clinical features of vitamin D deficiency.
8. Discuss Oxidative deamination and non-oxidative deamination giving suitable examples.
9. What are percent solutions? Explain the technique of preparing normal saline.
10. Discuss the role of hyperglycemic and hypoglycemic hormone in the regulation of blood glucose.

Or

Saturated and unsaturated fatty acids – definition, sources and examples.

11. What are amino acids? Classify amino acids based on metabolic fate.
12. Discuss the regulation of pH of blood by phosphate buffer system

SHORT ANSWER (Question No 15 & 20 choice)

10 x 3 = 30 Marks

13. Differentiate between DNA and RNA.
14. Megaloblastic anaemia.
15. Normal serum levels and altered clinical conditions for urea and creatinine in serum
Or
Define SI units. Discuss base units citing suitable examples.
16. Give the composition of sucrose, lactose and maltose and mention the linkages.
17. Balanced diet.
18. Define mucopolysaccharides and enumerate the functions of any two of them.
19. Enumerate the functions of glutathione, oxytocin and vasopressin.
20. Precautions during sample collection and transport of samples for blood gas analysis. Normal levels of blood pO_2 and pCO_2 .
Or
Insulin clearance.
21. Anaplerotic reactions of TCA cycle.
22. Causes and disorders of iron toxicity.
