

Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.Sc. Allied Health Sciences Degree Examination - 16-Dec-2022

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. Classify carbohydrates with suitable examples and describe the structure of starch.
2. Explain chemistry, dietary source, daily requirement, functions and deficiency disorders of Vitamin D.

OR

Explain the sources and functions of calcium. Discuss the role of vitamin D in calcium homeostasis and write the normal calcium reference range in blood.

SHORT ESSAYS (Question No 5 & 10 choice)

10 x 5 = 50 Marks

3. What are buffers? Mention the buffers present in plasma, intracellular fluid and urine.
4. Classify lipids with suitable example.
5. Explain the Watson and crick model of DNA.

OR

Definition and functions of essential fatty acids with examples.

6. Define enzymes. Classify them with example.
7. Discuss the digestion and absorption of carbohydrates.
8. What are clearance tests? List the substances used for clearance tests. Write its significance.
9. Elucidate steps of urea cycle.
10. Explain functions and deficiency manifestation of Thiamin.

OR

Biologically important peptides.

11. Explain the steps of beta oxidation of fatty acids.
12. What is Glycogenesis? Write the steps involved in formation of glucose from Alanine.

SHORT ANSWER (Question No 15 & 20 choice)

10 x 3 = 30 Marks

13. Urinary acidification test.
14. What are microminerals? Give two examples.
15. Name the ketone bodies and write two conditions for Ketonuria.

OR

Preparation of standard solution.

16. Define proenzymes. Give two examples.
17. What are essential amino acids? Give four examples.

Rajiv Gandhi University of Health Sciences, Karnataka

18. Discuss the role of HCl in digestion.
19. Define Specific Dynamic Action of food. Mention SDA values for major macronutrients.
20. What are radioisotopes? Give two examples.

OR

What is the strength of 2M NaOH in terms of percentage?

21. Give normal level of:
 - a) Fasting plasma glucose
 - b) Serum Total Bilirubin
 - c) Serum Urea
22. Define a) Molarity b) Normality c) Molality.
