

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 16-Dec-2022

Time: Three Hours

Max. Marks: 80 Marks

## BIOCHEMISTRY

(RS3 – Medical Laboratory Technology, Medical Imaging Technology and Radiotherapy Technology

RS2 – Operation Theatre Technology, Cardiac Care Technology, Perfusion Technology, Renal Dialysis Technology, Respiratory Care Technology, Anaesthesia Technology and Neurosciences Technology)

**Q.P. CODE: 3153**

**(QP contains two pages)**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

### SHORT ESSAYS (Answer Any Eight)

**8 x 5 = 40 Marks**

1. Mention the types of laboratory balances. Write about its maintenance and use.
2. Write the principle on which the pH meter works. Mention the components of pH meter and its uses in the laboratory.
3. Explain the responsibilities of a health care personnel.
4. Classify the hazards that can happen in laboratory. Mention the safety measures to be taken to prevent them.
5. Explain the principle of working of a colorimeter. Draw a neat labeled diagram to show its components.
6. Write the principle and working mechanism of a refrigerator. Mention the uses of refrigerator and deep freezers.
7. Define pipette. Mention the types of pipettes used in the laboratory. Write the advantages of automated pipettes.
8. How are biomedical waste segregated? Mention about its importance.
9. What is first aid? Mention the items and their uses in first aid kit.
10. Name the purine and pyrimidine bases. Mention the composition of nucleosides and nucleotides with an example.

### SHORT ANSWERS (Answer Any Ten)

**10 x 3 = 30 Marks**

11. Different types of funnels used in the laboratory.
12. Working mechanism and use of water bath.
13. Biochemical functions of lipids.
14. Cleaning of glassware and plastic ware in the laboratory.
15. Preparation of 1M NaOH.
16. Classification of amino acids based on nutritional requirement.
17. Define a) Svedberg unit b) Centrifugal force c) RPM.
18. Define carbohydrates. Classify carbohydrates and give one example to each class.
19. Technique for preparation and storage of standard albumin solution.
20. What are radioisotopes? Give two examples of radio isotopes and mention their applications.
21. Uses of a) Folin Wu tube b) Petri dish c) Stop watch.
22. Metric system and common laboratory measurements.

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## **TO THE POINT ANSWERS (Answer Any Five)**

**5 x 2 = 10 Marks**

23. Uses of magnetic stirrers.
24. Dilution factors.
25. What are reducing disaccharides? Give two examples.
26. Define a) Normality b) Molarity.
27. What is a Buffer?
28. What are essential amino acids? Give two examples.
29. Uses of measuring cylinders.

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