

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Discuss the importance of water quality and glassware in clinical laboratories. Add notes on cleaning, standardization of volumetric glassware.
- Q.24 Explain the role of acids, bases and pH in the human body.
- Q.25 Write an essay on blood collection for biochemical analysis: Changes after collection, management of disposal, different types of hazards in the laboratory.

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No. of Printed Pages : 4

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Roll No.

1st Semester/ DMLT, DMLT (for speech and Hearing Impaired) Subject : Basic Chemistry

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 The mass number of an atom is equal to the sum of:
- a) Protons and electrons
 - b) Neutrons and electrons
 - c) Protons and neutrons
 - d) Valence electrons only
- Q.2 Which type of glassware is most suitable for preparing standard solutions?
- a) Beaker
 - b) Conical flask
 - c) Volumetric flask
 - d) Measuring cylinder
- Q.3 Distilled water is used in clinical laboratories mainly to:
- a) Increase solute concentration
 - b) Remove ionic and organic impurities
 - c) Maintain constant osmotic pressure
 - d) Prevent microbial contamination only

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- Q.4 Colloids in the human body play an important role in:
- Buffer formation
 - Osmotic pressure maintenance
 - Gas exchange
 - Nerve conduction
- Q.5 The normal Physiological pH of blood is maintained by:
- Water intake
 - Electrolyte intake
 - Buffers
 - Vitamins
- Q.6 In photometry, absorbance is directly proportional to:
- Concentration of solute
 - Surface tension of solvent
 - Volume of solvent
 - Viscosity of fluid

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 What is the atomic number of oxygen.
- Q.8 Pipettes are standardized to deliver accurate _____ of liquid.
- Q.9 Define pipetting.
- Q.10 Organic compound primarily contain the element _____.
- Q.11 Write the SI unit of length.

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- Q.12 Blood collected for biochemical analysis should be disposed of using proper measures.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Define equivalent weight and molecular weight with one example each.
- Q.14 Write two reasons why water quality is crucial in clinical laboratories.
- Q.15 Differentiate between distilled water and deionised water.
- Q.16 List four common laboratory glassware and their uses.
- Q.17 Explain osmosis with an example relevant to the human body.
- Q.18 Write a short note on the nutritional importance of lipids.
- Q.19 Define acids and bases according to Arrhenius concept.
- Q.20 Distinguish between primary and secondary standard solutions with examples.
- Q.21 State the laws of photometry.
- Q.22 Mention any four Good Laboratory Practices (GLP) in clinical biochemistry.

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