

- Q.29 Define Adsorption. Enlist its applications.
 - Q.30 Differentiate between Ionic and Covalent bonding with examples.
 - Q.31 Enlist the qualities of drinking water.
 - Q.32 Define Oxidation and Reduction as per Electronic Concept.
 - Q.33 Write down the properties of Covalent bond.
 - Q.34 Define Periods and Groups in a modern Periodic table.
 - Q.35 Define Conductors. Name the types of Conductors.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain the modern concept of Atom. Name and give the significance of Quantum numbers.

Q.37 i) Define hard water. Briefly describe the types of hardness along with reason for hardness.
ii) Explain in brief the cleansing action of Soaps.

Q.38 i) Briefly discuss the buffer action of Acidic buffer
ii) Define Electrolytes and Non-electrolytes with suitable examples.

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1st Sem / DMLT
Subject:- Basic Chemistry

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Symbol of Copper is:-
a) C b) Cu
c) Co d) Cl

Q.2 The shape of P orbital is:-
a) Spherical b) Elliptical
c) Dumb-bell d) Conical

Q.3 Nucleus of an atom contains:-
a) electron and proton b) proton and neutron
c) Neutron and electron d) None

Q.4 PH of a neutral solution is:-
a) less than 7 b) More than 7
c) between 1 - 14 d) equal to 7

Q.5 One Faraday is equal to
a) 9650 C b) 10000 C
c) 196500 C d) 96500 C

Q.6 Which is not a good conductor

- a) Aqueous solution of NaCl
- b) fused NaCl
- c) Solid NaCl
- d) Silver

Q.7 Charge on a proton is:-

- a) Positive b) Negative
- c) No charge d) Any of above

Q.8 The symbol of iron is _____.

- a) N b) Cu
- c) Fe d) Be

Q.9 _____ is the strong acid:-

- a) NaOH b) CH₃COOH
- c) HCl d) KOH

Q.10 _____ is used as adsorption agent

- a) Cellulose b) Charcoal
- c) Starch d) Nylon

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 PPM stands for _____.

Q.12 Atomic number of Carbon is _____.

Q.13 Give an example of Strong base.

Q.14 Oxidation involves _____ of electrons.

Q.15 The energy of 4s orbital is _____ than that of 3d orbital.

Q.16 SI unit of volume is _____

Q.17 _____ water does not form lather with Soap.

Q.18 Number of orbitals in d-subshell are _____.

Q.19 When Acid and base react it forms _____

Q.20 Electrolysis involves _____ at anode.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Define Molarity and Molality. Give the mathematical expression for each.

Q.22 State Heisenberg's Uncertainty Principles. Write down its mathematical expression. Give its significance also.

Q.23 Calculate the number of moles in 392 g of Sulphuric acid (H₂SO₄)

Q.24 Briefly explain common Ion effect with a suitable example.

Q.25 Write down the applications of a buffer solution.

Q.26 What are emulsion? How are they classified.

Q.27 Write down the electronic Configuration of Carbon and Oxygen.

Q.28 Discuss in brief the size of Atom in periods and groups.