

No. of Printed Pages : 4

Roll No.

121912

1st Sem. / DMLT

Subject : Basic Chemistry

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) Write the S.I. unit of pressure.
 - b) What is the atomic mass of sodium.
 - c) Write the definition of molarity.
 - d) What type of charge is there on a neutron.
 - e) Draw the shape of p orbitals.
 - f) How many groups are present in modern periodic law?
 - g) What is the reason of permanent hardness of water.
 - h) _____ Water doesn't form lather with soap.
 - i) What are the qualities of good drinking water?

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- j) What is the pH of water.
- k) Give an example of weak acid?
- l) Loss of electron is known as _____
Oxidation/Reduction
- m) Give one example of strong electrolyte.
- n) What is the definition of emulsion.
- o) What type of reaction taking place on anode.
- p) Write an example of colloidal solution.
- q) What is the ionic product of water.
- r) What is the particle size of true solution.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) Differentiate between molarity and molality.
 - ii) Calculate the no. of moles in 48 gm of O₂.
(mole. wt. of O₂ is 16)
 - iii) What is valence bond theory.
 - iv) Differentiate between hard and soft water.
 - v) What are the methods of purification of water for drinking purposes.

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- vi) What is Equilibrium constant and explain its characteristics?
- vii) Differentiate between strong acids and weak acid with examples.
- viii) What are buffer solution acid write its applications
- ix) What is Neutralization? Explain it with example.
- x) What are redox reactions? Explain it.
- xi) What are Electrolytes? Give example of strong electrolytes and weak electrolytes.
- xii) Define oxidation and reduction with respect to electronic concept.
- xiii) What is colloidal solution. Give the types of colloids.
- xiv) Write a short note on adsorption. What are the applications of adsorption.
- xv) Write the shape of different S and P orbitals.

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SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 (a) Explain the terms
- (i) Matter (ii) Atomic mass
 - (iii) Compound (iv) Mixtures
 - (v) Molar mass
- (b) What is morality. Explain it with example.
- Q.4 (a) Explain the ionic bond & covalent bond with example
- (b) Write the Valence bond theory.
- Q.5 Explain the process of Electrolysis and write its application.
- Q.6 What is acid base titration. Write its application and the factors on which choice of indicators for acid base titration depends
- Q.7 (a) What are the qualities of good drinking water.
- (b) Write disadvantages of hard water in domestic uses.

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