

Time Allowed: 2.40 Hours"Section - B"Marks: 32

Q-2. Write short answers to any eight (8) of the following parts. All parts carry equal marks:-

- (i) How many grams are present in 4 moles of NaOH? (At. mass Na=23amu, O=16amu, H=1amu)
- (ii) Write difference between Rutherford and Bohr's atomic model?
- (iii) How many shells and valence electrons, the elements Chlorine and Magnesium have?
- (iv) Explain the Octet rule with the help of electronic configuration of inert gases?
- (v) Give difference between single and triple covalent bond with the help of example?
- (vi) A 500ml sample of hydrogen is heated from 27°C to 77°C at constant pressure. What is the final volume of the gas?
- (vii) Give one example of the following solutions:  
(a) Gas in Gas (b) Gas in Liquid (c) Liquid in Gas (c) Liquid in Solid
- (viii) How can we prepare 500ml of 0.02 molar Solution from 1 molar solution of HCl?
- (ix) Write chemical reactions for manufacturing of NaOH from Brine.
- (x) Explain electroplating of Zinc in terms of cathodic and anodic reaction.
- (xi) Why gold is used in standard desktop or laptop computers. Give proper reasons?

"Section - C"Marks: 21

Note: Answer any three (3) questions. All questions carry equal marks:-

- Q-3. (i) Find out the molecular mass of C<sub>2</sub>H<sub>6</sub> in a.m.u and also expressed it into grams? (3)  
(ii) Write the names of isotopes of Chlorine. Draw their atomic structure. (4)
- Q-4. (i) Which group in periodic table represents halogens? Write the names of elements included in that group. (3)  
(ii) Why are metallic bonds so strong? Justify your answer. (4)
- Q-5. (i) Calculate the final volume of 3.5dm<sup>3</sup> gas at 300mm of Hg when pressure changes to 400mm of Hg. (3)  
(ii) Differentiate between solute and solvent with the help of an example. (4)
- Q-6. (i) Write reaction of sodium with Sulphur and halogens? (3)  
(ii) What is the composition of electrodes and which electrolytes are used in dry cell? (4)