



<b>ASIA ENGLISH SCHOOL</b>		1 <sup>st</sup> Term Exam September 2009-10
Secondary /Higher Secondary Section		Date :16-09-09
Asia Campus, Drive-in Road, Ahmedabad-380054		Time : 2 Hours
Std : XI	<b>Sub : Chemistry</b>	Total Marks : 50

Roll No. \_\_\_\_\_

**Instruction :**

- (1) This question paper has total 28 questions and all are compulsory.
- (2) Write your answer to the point and as instructed in question.
- (3) Begin new section on new page and maintain the order of questions.
- (4) Use log table or simple calculator for calculation.
- (5) Draw a neat and dean diagram with necessary labeling when required.
- (6) Atomic Nos. – Al – 13, Si-14, P-15, S-16, H-1, O-8, N -7, He-2

**SECTION – A**

**There are 7 questions in this section, each carrying one mark.**

**[7]**

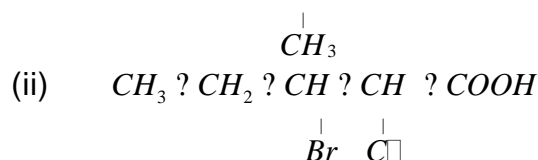
- (1) Weight of 2.24 L Nitrogen at STP is \_\_\_\_\_  
[a] 3.6g                      [b] 2.8g                      [c] 28g                      [d] 1.4g
- (2) Which of the following is isoelectronic to  $O^{2-}$  ?  
[a]  $N^{3-}$                       [b]  $Na$                       [c]  $N^{2-}$                       [d]  $S^{6-}$
- (3) Which of the following has highest atomic radii ?  
[a] Na                      [b] Mg                      [c] Al                      [d] Cl
- (4) What is the algebraic sum of oxidation numbers of both 'N' in  $NH_4NO_3$  ?  
[a] 5                      [b] -3                      [c] 2                      [d] 1
- (5) Dolomite is \_\_\_\_\_type of ore.  
[a] Carbonate                      [b] Sulphide                      [c] Oxide                      [d] Nitrate
- (6) Hybridisation of ethyne is ?  
[a]  $SP^3$                       [b] SP                      [c]  $SP^2$                       [d]  $SP^3d^2$
- (7) General electronic configuration of d-group elements is \_\_\_\_\_.  
[a]  $ns^{1,2}$                       [b]  $ns^2 np^{1,6}$   
[c]  $?n? 1?d^{1,10}$                       [d]  $?n? 1?d^{1,10} ns^{1,2}$

**SECTION – B**

**There are 7 questions in this section, each carries 1 mark.**

**[7]**

- (8) Write co-ordination number and radii ratio of NaCl.
- (9) Write electronic configuration of  ${}_{24}Cr$ .
- (10) Write Bohr's equation to find energy of electron and explain each term.
- (11) Write Ritz's equation of frequency and mention the colour observed in spectrograph during H-emission spectra.
- (12) Define : Ionization energy.
- (13) Write only reactions for electrolytic reduction of Magnesium chloride.
- (14) Write IUPAC name : (i)  $CH_3 ? CH_2 ? CH ? CH_2 ? CHO$



**(P.T.O.)**

**SECTION – C****There are 8 questions in this section, each carries 2 marks.****[16]**

- (15) Write difference between orbit and orbital.
- (16) Define (1) Aufbau's law  
(2) Isotopes
- (17) Explain why alkali metals cannot form negative ions ?
- (18) In following reaction mention oxidation number of each element and write which one is (i) oxidizing and (ii) reducing agent.  
 $MnO_4^- ? Br^- ? Mn^{2+} ? Br_2$
- (19) Draw neat & clean labelled, diagram and write only half reactions of standard H-electrode.
- (20) Define Roasting and Calcination.
- (21) Which metals are used as semiconductors. How are they refined ?
- (22) Draw flow chart of general process of metallurgy.

**SECTION – D****There are 4 questions in this section each carries 3 marks.****[12]**

- (23) Find out weight and mole-molecules number of nitrogen gas of 5 litre volume at 2 atmosphere pressure and  $60^\circ C$  temperature. (N =14 g/mole)
- (24) What is electronegativity ? Explain it as a periodic property.
- (25) Balance following Redox reaction by oxidation no and half reaction method. (Acidic Med.)  $I_2 ? S_2O_3^{2-} ? I^- ? S_4O_6^{2-}$
- (26) Explain  $SP^2$  hybridization and shape of ethene molecule.

**SECTION – E****There are 2 questions in this section each carries 4 marks.****[8]**

- (27) (A) Write Dalton's law of partial pressure  
(B) In a closed vessel of 5 litre volume 20g sulphur trioxide gas and 2g Helium gas are filled at  $27^\circ C$ . Calculate partial pressure of gases and pressure of the gaseous mixture.
- (28) What is homologous series ? Explain its characteristics.
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