

RPET

SAMPLE PAPER 2008

CHEMISTRY

1. If Chloroform is left open in air in presence of sun rays :

- (1) explosion takes place
- (2) poisonous gas phosgene is formed
- (3) polymerisation occurs
- (4) no reaction takes place

2. What is the correct representation for the solubility product constant of Ag_2CrO_4 ?

- (1) $[\text{Ag}^+]^2 [\text{CrO}_4^{2-}]$
- (2) $[\text{Ag}^+] [\text{CrO}_4^{2-}]$
- (3) $[2\text{Ag}^+] [\text{CrO}_4^{2-}]$
- (4) $[2\text{Ag}^+]^2 [\text{CrO}_4^{2-}]$

3. The gastric juice in our stomach contains enough hydrochloric acid to make the hydrogen ion concentration about 0.01 mole/l. The pH of the gastric Juice is :

- (1) 0.01
- (2) 1
- (3) 2
- (4) 10

4. In which of the following reactions, there is no change in valence ?

- (1) $4\text{KClO}_3 = 3\text{KClO}_4 + \text{KCl}$
- (2) $\text{SO}_2 + 2\text{H}_2\text{S} = 2\text{H}_2\text{O} + 3\text{S}$
- (3) $\text{BaO}_2 + \text{H}_2\text{SO}_4 = \text{BaSO}_4 + \text{H}_2\text{O}_2$
- (4) $2\text{BaO} + \text{O}_2 = 2\text{BaO}_2$

5. A metallic carbide on reaction with water gives a colourless gas which burns readily in air and which gives a precipitate with ammonical silver nitrate solution. The gas evolved is :

- (1) Methane
- (2) Ethene
- (3) Ethylene
- (4) Acetylene

6. Compared to the first ionization potential of an atom the second is

- (1) the same
- (2) greater
- (3) smaller
- (4) negligible

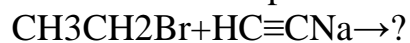
7. Sodium reacts with water more vigorously than lithium, because it

- (1) has higher atomic weight
- (2) is more electronegative
- (3) is more electropositive
- (4) is a metal

8. Acetic acid is obtained when

- (1) methyl alcohol is oxidised with potassium permanganate
- (2) Calcium acetate is distilled in the presence of calcium formate
- (3) acetaldehyde is oxidised with potassium dichromate and sulphuric acid
- (4) glycerol is heated with sulphuric Acid

9. Which are the products of the reaction



- (1) $\text{CH}_3\text{CH}_2\text{C}\equiv\text{CH} + \text{NaBr}$
- (2) $\text{CH}_2=\text{CH}_2 + \text{HC}\equiv\text{CH} + \text{NaBr}$
- (3) $\text{CH}_3\text{CH}_2\text{CH} + \text{CH}_2 + \text{NaBr}$
- (4) $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}_3 + \text{NaBr}$

10. What is the correct IUPAC name for

-hexenoic acid, (1S, 5S)-5-methyl-1-hexenoic acid

- (1) 5-Carboxy-2-methyl pentene
- (2) 4-Isopropyl-3-butenic acid
- (3) 4-Isopropyl-3-butenic acid
- (4) 5-Methyl-3-hexenoic acid