

## Chemistry

**These are 36 questions out of 40. Remaining questions will be updated soon.**

1. Most powerful reducing agent in aqueous solution?

- (1) Li                      (2) Na                      (3) Mg                      (4) Cs

**Ans: [1]**

2. Order of acidity in following arrange in descending order. RCOOH, HC ≡ CH, RCH<sub>2</sub>OH, H<sub>2</sub>O

- (1) RCOOH > RCH<sub>2</sub>OH > H<sub>2</sub>O > HC ≡ CH    (2) RCOOH > H<sub>2</sub>O > RCH<sub>2</sub>OH > HC ≡ CH  
 (3) H<sub>2</sub>O > RCH<sub>2</sub>OH > HC ≡ CH > RCOOH    (4) HC ≡ CH > H<sub>2</sub>O > RCH<sub>2</sub>OH > RCOOH

**Ans: [2]**

3. Which of the following reactions favours C<sub>2</sub>H<sub>5</sub>Cl only from C<sub>2</sub>H<sub>6</sub> and Cl<sub>2</sub>

- (1)  $\text{C}_2\text{H}_6 + \text{Cl}_2 \xrightarrow[\text{Sunlight}]{\text{UV}}$  (excess)                      (2)  $\text{C}_2\text{H}_6 + \text{Cl}_2 \xrightarrow[\text{Sunlight}]{\text{UV}}$  (excess)  
 (3)  $\text{C}_2\text{H}_6 + \text{Cl}_2 \xrightarrow{\text{dark}}$  (excess)                      (4)  $\text{C}_2\text{H}_6 + \text{Cl}_2 \xrightarrow{\text{UV}}$

**Ans: [1]**

4. Oxidation state of most electronegative atom in products formed from the reaction of BaO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> is

- (1) O and -1                      (2) -1 and -2                      (3) -1 and O                      (4) -2 and +1

**Ans: [2]**

5. Which of the following has lowest ionisation potential,

- (1) H                      (2) Cl                      (3) F                      (4) Fr

**Ans: [4]**

6. Oxidation state of "Mn" in compound K<sub>2</sub>MnO<sub>4</sub> and KMnO<sub>4</sub> is

- (1) +7 and +6                      (2) +5 and +7                      (3) +6 and +7                      (4) +6 and +5

**Ans: [3]**

7. Number of vacant orbitals present in the element with atomic number 14?

- (1) 4                      (2) 3                      (3) 6                      (4) 5

**Ans: [6]**

8. 1 Mole of ethyl alcohol react with 1 mole of acetic acid and two-third of acetic acid gets converted into ester. find equilibrium constant of reaction.

- (1) 1                      (2) 2                      (3) 3                      (4) 4

**Ans: [4]**

9. pH of 0.1 N NaOH is  
 (1) 12                      (2) 13                      (3) 14                      (4) 11

Ans: [2]

10. Specific rate constant of a first order reaction depends upon  
 (1) concentration of reactants                      (2) concentration of products  
 (3) temperature                      (4) time

Ans: [3]

11. Total number of chain isomers of alkane  $C_6H_{14}$  are  
 (1) 4                      (2) 5                      (3) 6                      (4) 7

Ans: [2]

12. Which of the following is sandmeyer's reaction  
 (1)  $C_6H_6 + Cl_2 \xrightarrow{AlCl_3} C_6H_5Cl$                       (2)  $C_6H_5N_2^+Cl^- \xrightarrow{CuCl/HCl} C_6H_5Cl + N_2$   
 (3)  $C_6H_5NH_2 \xrightarrow{NaNO_2/HCl} C_6H_5N_2^+Cl^-$                       (4)  $C_6H_5OH \xrightarrow{Zn} C_6H_6$

Ans: [2]

13. Which of the following is weakest lewis Base  $\longrightarrow$   
 (1)  $H^-$                       (2)  $OH^-$                       (3)  $Cl^-$                       (4)  $HCO_3^-$

Ans: [4]

14. Bond angle is maximum in  
 (1)  $NH_3$                       (2)  $H_2O$                       (3)  $CO_2$                       (4)  $CH_4$

Ans: [3]

15. Which of the following is diamagnetic  
 (1)  $[NiCl_4]^{2-}$                       (2)  $[Ni(NH_3)_4]^{+2}$                       (3)  $[Ni(CN)_4]^{2-}$                       (4)  $[Cu(H_2O)_6]^{+3}$

Ans: [3]

16. Which of the following contradicts Bohr's orbital theory  
 (1) de-Broglie Relation                      (2) Hund's Rule  
 (3) Aufbau Rule                      (4) Pauli's exclusion Principle

Ans: [1]

17. Which of following is most soluble in aqueous solution

- (1)  $\text{BeSO}_4$                       (2)  $\text{MgSO}_4$                       (3)  $\text{BaSO}_4$                       (4)  $\text{CaSO}_4$

Ans: [1]

18.  $\Delta Q \longrightarrow$  Heat given system.

$\Delta w \longrightarrow$  work done.

Then which of the following does not depends upon path

- (1)  $\Delta Q$                       (2)  $\Delta w$                       (3)  $\Delta Q + \Delta w$                       (4)  $\Delta Q - \Delta w$

Ans: [3]

19. If shortest wavelength in Lyman series is  $916.33 \text{ \AA}$ , then longest wavelength in Lyman series is

- (1)  $1215 \text{ \AA}$                       (2) infinity                      (3)  $1035 \text{ \AA}$                       (4)  $3600 \text{ \AA}$

Ans: [1]

20. 
$$\begin{array}{ccccccc} & & \text{H} & \text{H} & \text{H} & & \\ & & | & | & | & & \\ \text{H}_3\text{C} & - & \text{C} & - & \text{C} & = & \text{C} & - & \text{C} & \equiv & \text{C} & - & \text{CH}_3 \\ & & | & & & & & & & & & & \\ & & \text{H} & & & & & & & & & & \end{array}$$
, The IUPAC name of above compound is

- (1) hept-4-ene-2-yne    (2) hept-2-yne-4-ene    (3) hept-2-ene-4-yne    (4) hept-4-yne-2-ene

Ans: [1]

21. Which of the following polymer posses amide linkage

- (1) Tenylene                      (2) BUNA-S                      (3) Nylon-66                      (4) Teflon

Ans: [3]

22. When bleaching powder is treated with concentrated  $\text{H}_2\text{SO}_4$  product formed is

- (1)  $\text{CCl}_4$                       (2)  $\text{CHCl}_3$                       (3)  $\text{CH}_2\text{Cl}_2$                       (4)  $\text{CH}_3\text{Cl}$

Ans: [2]

23. Methyl Bromide ( $\text{CH}_3\text{Br}$ ) is not used for

- (1) Bleaching                      (2) Insecticide  
(3) Disinfectant                      (4) Disinfectant for young fruits

Ans: [1]



31. Which of the following is most favourable for formation of an ionic bond  
 (1) large cation small anion                      (2) small cation large anion  
 (3) small cation small anion                      (4) large cation large anion

Ans: [1]

32. Antimarkovnikove addition of HBr is not given by  
 (1) 1-Propene                      (2) But-1-ene                      (3) But-2-ene                      (4) Pent-2-ene

Ans: [3]

33. An atom placed on an edge of cube contributes how much to its unit cell

- (1)  $\frac{1}{2}$                       (2)  $\frac{1}{4}$                       (3)  $\frac{1}{8}$                       (4)  $\frac{1}{16}$

Ans: [2]

34. Which of the following does not give tollen test  
 (1) Formaldehyde                      (2) Acetaldehyde                      (3) Formic acids                      (4) Acetic acid

Ans: [4]

35. To perpare acetylene from tetacholro ethane the reagents used are  
 (1) Aq. KOH, NaNH<sub>2</sub>                      (2) Alc. KOH NaNH<sub>2</sub>  
 (3) Zinc                      (4) AlCl<sub>3</sub>

Ans: [3]

36. When H<sub>2</sub>O<sub>2</sub> react with lead compound (Black) the colour turns in to white due to formation of

- (1) PbS                      (2) PbSO<sub>4</sub>                      (3) Pb<sub>2</sub>O<sub>4</sub>                      (4) PbO<sub>2</sub>

Ans: [2]

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