

## Competitive Exams Chemistry Mock Test 8

Q-1. The correct order of dipole moments of HF,  $H_2S$  and  $H_2O$  is.

- (a)  $HF < H_2S < H_2O$
- (b)  $HF < H_2S > H_2O$
- (c)  $HF > H_2S > H_2O$
- (d)  $HF > H_2O < H_2S$

Q-2. Heat exchanged in a chemical reaction at the constant temperature and pressure is known as

- (a) Internal energy
- (b) Entropy
- (c) Enthalpy
- (d) Free energy

Q-3. The alkane is not obtained from

- (a) Hydroxylation of ethane
- (b)  $C_2H_5OH \xrightarrow[150^\circ C]{HI/Red P}$
- (c) *butanone*  $\xrightarrow[Reflux]{Zn/Hg-HCl}$
- (d) Sodium propionate solution electrolysis

Q-4. According to Bronsted, a base is a substance which

- (a) Accept proton
- (b) Donate electron
- (c) Lose a pair of electron
- (d) Gain a pair of electron

Q-5. A mixture of sodium benzoate and sodium on heating produce

- (a)  $CH_4$

(b)  $C_6H_6$

(c) *both a, b*

(d) none of these

Q-6. The de-Broglie wavelength of a particle with mass 1 gm and velocity 100 m/s is

(a)  $6.6 \times 10^{-33} m$

(b)  $6.6 \times 10^{-35} m$

(c)  $6.6 \times 10^{-36} m$

(d)  $6.6 \times 10^{-37} m$

Q-7. Baeyer's reagent is used

(a) in Benedict solution

(b) for oxidation

(c) for reduction

(d) for reduction

Q-8. The number of electrons in  $[{}_{19}K^{40}]^{-1}$

(a) 18

(b) 19

(c) 20

(d) 21

Q-9. The molecular weight of a compound is 180. if its empirical formula is  $CH_2O$  then the molecular formula of compound is

(a)  $C_2H_4O_2$

(b)  $C_3H_6O_3$

(c)  $C^6H^{12}O^{16}$

(d)  $C^{12}H^{24}O^{12}$

Q-10. The weight of lime obtained by heating 200 kg of 95% pure lime stone is

(a) 98.4 kg

(b) 106.4 kg

(c) 112.8 kg

(d) 122.6 kg

Q-11. In a reaction  $A + B \rightleftharpoons C + B$ , if the concentration of A and B is doubled. then the equilibrium constant is

(a) remains same

(b) halved

(c) double

(d) increased four times

Q-12. The oxidation state of chromium in potassium dichromate is

(a) +4

(b) -4

(c) +6

(d) -6

Q-13. The percentage of carbon in anthracite is

(a) 60%

(b) 70%

(c) 80%

(d) 90%

Q-14. The reactivity of metals with water is in the order of

(a)  $Na > Mg > Zn > Fe > Cu$

(b)  $Cu > Fe > Zn > Mg > Na$

(c)  $Mg > Zn > Na > Fe > Cu$

(d)  $Zn > Na > Mg > Fe > Cu$

Q-15. Magnesium contain

(a)  $Al + Mg$

(b)  $Mg + Cu$

(c)  $Mg + Fe$

(d)  $Mg + Ag$

Q-16. Graphite is a good conductor of heat and electricity because it contains

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- (a) Layer of carbon atoms
- (b) Sheet like structure
- (c) Free electrons
- (d) no free electrons

Q-17. The boiling point of three saturated hydro carbons A, B and C are  $-102^{\circ}\text{C}$ ,  $-43.4^{\circ}\text{C}$ , and  $-0.6^{\circ}\text{C}$  respectively. The hydrocarbon having the maximum number of carbon atoms in its molecule is

- (a) A
- (b) B
- (c) C
- (d) none of these

Q-18. The volume of a gas measured at  $27^{\circ}\text{C}$  and 1atm pressure is 10 liters. To reduce the volume to 5 liters at 1 atm pressure, the temperature required is

- (a) 75 K
- (b) 150 K
- (c) 225 K
- (d) 300 K

Q-19. The coordinate bond is found in

- (a)  $\text{SO}_3$
- (b)  $\text{H}_2\text{SO}_4$
- (c)  $\text{O}_3$
- (d) All the above

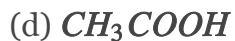
Q-20. Which of the following isomerism is exhibited by?  $\text{CH}_3 - \text{O} - \text{C}_3\text{H}_7$  and  $\text{C}_2\text{H}_5\text{OC}_2\text{H}_5$ .

- (a) Optical isomerism
- (b) Chain isomerism
- (c) Metamerism
- (d) Position isomerism

Q-21. Chlorine oxidase ethyl alcohol to

- (a)  $\text{CH}_3\text{CHO}$

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Q-22. Tyndall effect can be observed in

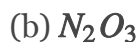
(a) Colloidal solution

(b) Solvent

(c) Solute

(d) Precipitate

Q-23.  $4HNO_3 + P_4O_{10} \rightarrow 4HPO_3 + X$  in the above reaction the product X is



Q-24. Mg does not decompose

(a) Cold water

(b) Hot water

(c) Steam

(d) Boiled water

Q-25.  $CaC_2$  Reacts with  $H_2O$  to produce



Q-26. Which indicator is used to titrate  $Na_2CO_3$  solution with HCl ?

(a) Methyl orange

(b) Phenolphthalein

(c) dil.  $H_2SO_4$

(d) None of the above

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Q-27. The amount of dibasic acid present in 100 ml of the aq. solution to give strength is [mol. wt=2000, normality=0.1]

- (a) 0.5 gm
- (b) 1 gm
- (c) 1.5 gm
- (d) 2 gm

Q-30. Calcium formate on dry heating produce

- (a)  $HCHO$
- (b)  $CH_3CHO$
- (c)  $CH_3COCH_3$
- (d)  $CH_3COOH$

Q-31. Chromyl chloride oxidise toluene to Benz aldehyde this reaction is known as

- (a) Rosenmund reaction
- (b) Wurtz reaction
- (c) Etard reaction
- (d) Fittig reaction

Q-32. Which of the following have least  $PK_a$  value?

- (a)  $CCl_3COOH$
- (b)  $CCl_2ClCOOH$
- (c)  $CF_3COOH$
- (d)  $CH_3COOH$

Q-33. The shape of  $CO_2$  molecule is

- (a) linear
- (b) tetrahedral
- (c) planar
- (d) pyramidal

Q-34. The gas evolved by heating potassium ferrocyanide crystals with conc.  $H_2SO_4$  is

- (a)  $CO$

(b)  $CO_2$

(c)  $SO_2$

(d)  $SO_3$

Q-35. For an ideal gas joule Thomson coefficient is

(a) Zero

(b) Negative

(c) Positive

(d) Depend on molecular weight

Q-36. By which reaction a ketone can be converted into a hydrocarbon?

(a) Aldol condensation

(b) Reimer-Tiemann reaction

(c) Cannizzaro reaction

(d) Wolf-Kishner reaction

Q-37. The photo-chemical laws are applicable to

(a) Primary reaction

(b) Secondary reaction

(c) Both of these

(d) None of these

Q-38. A compound having molecular mass = 78 contains C =92.31% an H=7.69%. its molecular formula is

(a)  $C_5H_{12}$

(b)  $C_5H_{18}$

(c)  $C_4H_3O$

(d)  $C_6H_6$

Q-39. Half-life of radium is 1580 years. Its average life will be

(a)  $1.832 \times 10^3$  yrs.

(b)  $2.5 \times 10^3$  yrs.

(c)  $2.275 \times 10^3$  yrs.

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(d)  $8.825 \times 10^2$  yrs.

Q-40. In lake test of  $Al^{3+}$  ion, there is formation of colored floating lake. It is due to

- (a) Adsorption of litmus by  $H_2O$
- (b) Adsorption of litmus by  $Al(OH)_3$
- (c) Adsorption of litmus by  $Al(OH)_4^-$
- (d) None of these