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Chemistry Mock Test 9

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

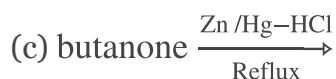
- (a) $HF < H_2S < H_2O$
- (b) $HF < H_2S > H_2O$
- (c) $HF > H_2S > H_2O$
- (d) $HF > H_2O < H_2S$

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



(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) $6.6 \times 10^{-33} \text{ m}$
- (b) $6.6 \times 10^{-35} \text{ m}$
- (c) $6.6 \times 10^{-36} \text{ m}$
- (d) $6.6 \times 10^{-37} \text{ m}$

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 $[_{19}\text{K}^{40}]^{-1}$

- (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) $\text{C}_2\text{H}_4\text{O}_2$
- (b) $\text{C}_3\text{H}_6\text{O}_3$
- (c) $\text{C}^6\text{H}^{12}\text{O}^{16}$
- (d) $\text{C}^{12}\text{H}^{24}\text{O}^{12}$

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) $\text{Na} > \text{Mg} > \text{Zn} > \text{Fe} > \text{Cu}$

(b) $\text{Cu} > \text{Fe} > \text{Zn} > \text{Mg} > \text{Na}$

(c) $\text{Mg} > \text{Zn} > \text{Na} > \text{Fe} > \text{Cu}$

(d) $\text{Zn} > \text{Na} > \text{Mg} > \text{Fe} > \text{Cu}$

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

- (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 $-102^{\circ}C$, $-43.4^{\circ}C$, and $-0.6^{\circ}C$ 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 $27^{\circ}C$ 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) SO_3
- (b) H_2SO_4
- (c) O_3
- (d) All the above

Q-20. Which of the following isomerism is exhibited by?

$CH_3 - O - C_3H_7$ and $C_2H_5OC_2H_5$.

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

Q-21. Chlorine oxidase ethyl alcohol to

- (a) CH_3CHO

(b) $\text{CCl}_3 \text{CHO}$

(c) HCHO

(d) $\text{CH}_3 \text{COOH}$

Q-22. Tyndall effect can be observed in

(a) Colloidal solution

(b) Solvent

(c) Solute

(d) Precipitate

Q-23. $4 \text{HNO}_3 + \text{P}_4\text{O}_{10} \rightarrow 4 \text{HPO}_3 + X$ in the above reaction the product X is

(a) NO_2

(b) N_2O_3

(c) N_2O_4

(d) N_2O_5

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

(a) CH_4

(b) C_2H_6

(c) C_2H_2

(d) C_2H_4

Q-26. Which indicator is used to titrate $\text{Na}_2 \text{CO}_3$ solution with HCl ?

(a) Methyl orange

(b) Phenolphthalein

(c) dil. $\text{H}_2 \text{SO}_4$

(d) None of the above

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) $\text{CCl}_2\text{CH}_2\text{COOH}$
- (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 % and H = 7.69 % . its molecular formula is

(a) C_5H_{12}

(b) C_5H_{18}

(c) $\text{C}_4\text{H}_3\text{O}$

(d) C_6H_6

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

(a) 1.832×10^3 yrs .

(b) 2.5×10^3 yrs .

(c) 2.275×10^3 yrs .

(d) 8.825×10^2 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

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