QB365 Question Bank Software Study Materials

Fundamentals of Organic Chemistry 50 Important 1 Marks Questions With Answers (Book Back and Creative)

11th Standard

Chemistry

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) Select the molecule which has only one π bond.

(a) CH_3– CH = CH – CH_3 (b) CH_3– CH = CH – CHO (c) CH_3– CH = CH – COOH (d) All of these

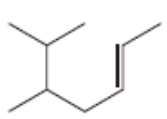
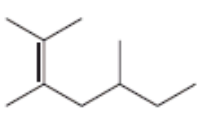
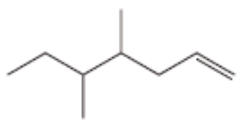
2) In the hydrocarbo $\overset{7}{C}H_3 - \overset{6}{C}H_2 - \overset{5}{C}H = \overset{4}{C}H - \overset{3}{C}H_2 - \overset{2}{C} = \overset{1}{C}H$ the state of hybridisation of carbon 1,2,3,4 and 7 are in the following sequence.

(a) sp, sp, sp^3, sp^2, sp^3 (b) sp^2, sp, sp^3, sp^2, sp^3 (c) sp, sp, sp^2, sp, sp^3 (d) none of these

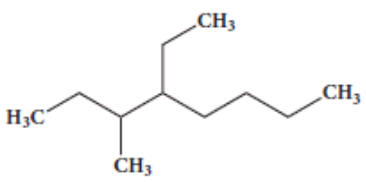
3) The general formula for alkadiene is _____

(a) C_nH_{2n} (b) C_nH_{2n-1} **(c) C_nH_{2n-2}** (d) C_nH_{n-2}

4) Structure of the compound whose IUPAC name is 5,6 - dimethylhept - 2 - ene is _____

(a)  (b)  (c)  (d) None of these

5) The IUPAC name of the Compound is _____



(a) 2,3 - Diemethylheptane (b) 3- Methyl -4- ethyloctane (c) 5-ethyl -6-methyloctane **(d) 4-Ethyl -3 - methyloctane**

6) Which one of the following names does not fit a real name?

(a) 3 – Methyl –3–hexanone (b) 4–Methyl –3– hexanone (c) 3– Methyl –3– hexanol (d) 2– Methyl cyclo hexanone

7) The IUPAC name of the compound CH_3 – CH = CH – C ≡ CH is _____

(a) Pent - 4 - yn-2-ene **(b) Pent -3-en-1-yne** (c) pent – 2– en – 4 – yne (d) Pent – 1 – yn –3 –ene

8) The IUPAC name of the compound $H_3C - \overset{CH_3}{\underset{CH_3}{C}} - CH = C(CH_3)_2$ is _____

(a) 2,4,4 – Trimethylpent -2-ene (b) 2,4,4 – Trimethylpent -3-ene (c) 2,2,4 – Trimethylpent -3-ene

(d) 2,2,4 – Trimethylpent -2-ene

9) The IUPAC name of the compound $CH_3 - \underset{OH}{CH} - COOH$ is _____

(a) 2 – Hydroxypropionic acid **(b) 2 – Hydroxy Propanoic acid** (c) Propan – 2– ol –1 – oic acid (d) 1 – Carboxyethanol

10) The structure of isobutyl group in an organic compound is_____

(a) CH_3 - CH_2 - CH_2 - CH_2 - (b) $CH_3 - \overset{CH_3}{\underset{CH_3}{C}}$ **(c)** $CH_3 - \underset{CH_3}{CH} - CH_2-$ (d) $CH_3 - \underset{|}{CH} - CH_2 - CH_3$

11) The number of stereoisomers of 1, 2 – dihydroxy cyclopentane _____

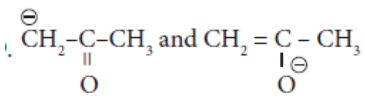
(a) 1 (b) 2 **(c) 3** (d) 4

12) How many cyclic and acyclic isomers are possible for the molecular formula C_3H_6O?

(a) 4 (b) 5 **(c) 9** (d) 10

13) Which one of the following shows functional isomerism?

(a) ethylene (b) Propane **(c) ethanol** (d) CH_2Cl_2

14)  are _____

(a) resonating structure **(b) tautomers** (c) Optical isomers (d) Conformers

15) Nitrogen detection in an organic compound is carried out by Lassaigne's test. The blue colour formed is due to the formation of _____

(a) $Fe_3[Fe(CN)_6]_2$ **(b) $Fe_4[Fe(CN)_6]_3$** (c) $Fe_4[Fe(CN)_6]_2$ (d) $Fe_3\ [Fe(CN)_6]_3$

16) Lassaigne's test for the detection of nitrogen fails in _____

(a) $H_2N - CO - NH.NH_2.HCl$ (b) $NH_2 - NH_2.\ HCl$ **(c) $C_6H_5 - NH - NH_2.\ HCl$** (d) $C_6H_5\ CONH_2$

17) Connect pair of compounds which give blue colouration / precipitate and white precipitate respectively, when their Lassaigne's test is separately done.

(a) $NH_2\ NH_2\ HCl$ and $ClCH_2 - CHO$ (b) $NH_2\ CS\ NH_2$ and $CH_3 - CH_2Cl$ (c) $NH_2\ CH_2\ COOH$ and $NH_2\ CONH_2$

(d) $C_6H_5NH_2$ and $ClCH_2 - CHO$

18) Sodium nitropruside reacts with sulphide ion to give a purple colour due to the formation of _____

(a) $[Fe(CN)_5\ NO]^{3-}$ (b) $[Fe(NO)_5\ CN]^{+}$ **(c) $[Fe(CN)_5NOS]^{4-}$** (d) $[Fe\ (CN)_5\ NOS]^{3-}$

19) An organic Compound weighing 0.15g gave on carius estimation, 0.12g of silver bromide. The percentage of bromine in the Compound will be close to _____

(a) 46% **(b) 34%** (c) 3.4% (d) 4.6%

20) A sample of 0.5g of an organic compound was treated according to Kjeldahl's method. The ammonia evolved was absorbed in 50mL of 0.5M H_2SO_4. The remaining acid after neutralisation by ammonia consumed 80mL of 0.5 MNaOH, The percentage of nitrogen in the organic compound is _____

(a) 14% **(b) 28%** (c) 42% (d) 56%

21) In an organic compound, phosphorus is estimated as _____

(a) $Mg_2P_2O_7$ (b) $Mg_3(PO_4)_2$ (c) H_3PO_4 (d) P_2O_5

22) Ortho and para-nitro phenol can be separated by _____

(a) azeotropic distillation (b) destructive distillation **(c) steam distillation** (d) cannot be separated

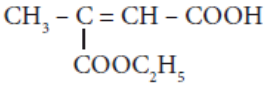
23) The purity of an organic compound is determined by _____

(a) Chromatography (b) Crystallisation (c) melting or boiling point **(d) both (a) and (c)**

24) A liquid which decomposes at its boiling point can be purified by _____

(a) distillation at atmospheric pressure **(b) distillation under reduced pressure** (c) fractional distillation

(d) steam distillation

25) Assertion:  is 3– carbethoxy -2- butenoicacid

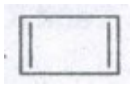
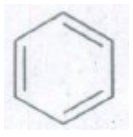
Reason: The principal functional group gets lowest number followed by double bond (or) triple bond.

(a) both the assertion and reason are true and the reason is the correct explanation of assertion

(b) both assertion and reason are true and the reason is not the correct explanation of assertion

(c) assertion is true but reason is false (d) both the assertion and reason are false

26) In which of the following compound has only one type of hybridised carbon atom?

(a)  **(b)**  (c)  (d) All of these

27) The number of chain isomers possible in $C_5 H_{I2}$ is _____

(a) 2 **(b) 3** (c) 4 (d) 5

28) Number of structural isomers possible in C_3H_6O are _____

(a) 9 (b) 6 (c) 5 (d) 3

29) Steam distillation is applied for the separation of the compounds which are.

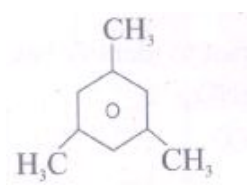
(a) steam volatile and soluble in water **(b) steam volatile and in soluble in water**

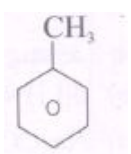
(c) steam volatile and decompose in water (d) all the above

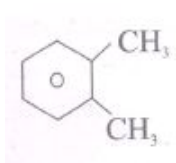
30) Which one of the following is the functional group of ketone?

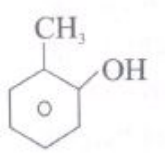
(a) -CHO **(b)** $-\overset{\overset{O}{\|}}{C}-$ (c) -O- (d) -OH

31) Which one of the following is commonly called mesitylene?

(a) 

(b) 

(c) 

(d) 

32) Which one of the following is called benzylchloride?

(a) $C_6H_5CH_2Cl$ (b) $C_6H_5CHCl_2$ (c) $C_6H_5CCl_3$ (d) C_6H_5Cl

33) Which of the following pair are called functional isomers?

(a) methyl propyl ether and diethyl ether (b) 2-pentanone & 3-pentanone **(c) propanoic acid and methyl acetate**

(d) 1-butanol and 2-butanol

34) Which one of the following is the formula of sodium nitroprusside?

(a) $Na_4[Fe(CN)_5NO_5]$ (b) $Na_4[Fe(CN)_5SON]$ (c) $Na_4[Fe(CN)_6]$ (d) $Fe_4[Fe(CN)_6]_3$

35) Which one of the following is not identified by Lassaigne's test?

(a) nitrogen (b) sulphur (c) halogens **(d) phosphorous**

36) Which of the following is not purified by sublimation method?

(a) Camphor (b) Benzoic acid (c) Naphthalene **(d) Nitrobenzene**

37) Which of the following compounds gives curdy white precipitate in Lassaigne's test?

(a) CH_3Br (b) C_2H_5I **(c) CH_3Cl** (d) $C_6H_5NO_2$

38) Which of the following compounds will exhibit cis-trans isomerism?

(a) 2-Butene (b) 2-Butyne (c) 1-Butene (d) 2-Butanol

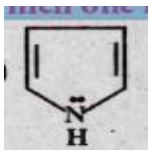
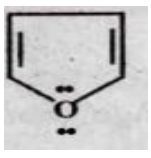
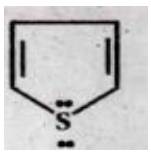
39) Almost in all compounds of carbon, carbon forms four _____ bonds.

(a) ionic (b) co - ordinate **(c) covalent** (d) hydrogen

40) An example for organic solvent is _____.

(a) Benzene (b) Toluene (c) $CHCl_3$ **(d) All of these**

41) Which one is a non - benzenoid compound?

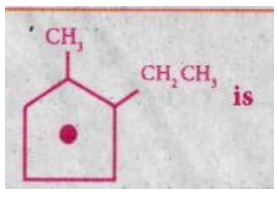
(a)  (b)  (c)  **(d) < div >All of these< /div >**

42) The functional group of thioalcohol is _____.

(a) -SH (b) -SO (c) C = O (d) -CHO

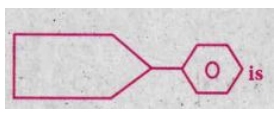
43) Which one is an acid amide?

(a) R - CO NH_2 (b) R - CO NH_3 (c) R - COO NH_2 (d) R - $(CO)_2$ NH_2

44) 

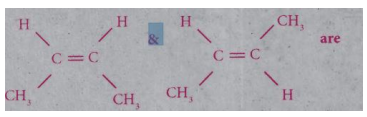
(a) < div >2 - methyl I - ethyl cyclo pentane< /div > **(b) < div >1 - ethyl 2- methyl cyclo pentane< /div >**

(c) < div >cyclo pentane 1 - ethyl< /div > (d) < div >2- ethyl - 1 - cyclo pentane< /div >

45) 

(a) < div >cyclopentyl benzene< /div > (b) < div >phenyl cyclo pentane< /div > (c) < div >cyclo butyl benzene< /div >

(d) < div >phenyl cyclo benzoic acid< /div >

46) 

(a) < div >stereo isomers< /div > (b) < div >optical isomers< /div > **(c) < div >geometrical isomers< /div >** (d) none

47) The optical isomer, which rotates the plane of the plane polarised light to the right (or) clockwise direction is called ____.

(a) dextrorotatory (b) laevo rotatory (c) Both (a) & (b) (d) optical rotation

48) The prussian blue of ferric ferrocyanide indicates the presence of this element.

(a) O (b) H (c) C **(d) N**

49) Solids are purified by _____.

(a) Sublimation (b) Crystallisation (c) Fractional crystallisation **(d) All of these**

50) During the N_2 estimation present in an Organic compound by Kjeldhal's method, the ammonia evolved from 0.5 g of the compound in Kjeldhal's estimation of nitrogen neutralised 10 ml of 1M H_2SO_4. Find the % of N_2 in the compound.

(a) 96% (b) 100% (c) 46% **(d) 56%**