



QUESTION BANK

ORGANIC CHEMISTRY (3320501) /SEM-2

SUBJECTIVE QUESTIONS

Sr. No.	Question	BTL	CO
1	Write the types of structural isomerism		1
2	Define Homologous series.		1
3	Define isomerism.		1
4	Distinguish between organic and inorganic compound		1
5	Write homologous series of aldehyde		1
6	Write structural formula of following compounds (1)BHC (2)TNT (3)Propyne (4)oxalic acid.		1
7	Write short note on geometrical isomerism.		1
8	Give IUPAC nomenclature of following compounds. (1) $\text{CH}_3\text{CH}=\text{CHCH}_2\text{CH}_3$ (2) CH_3OCH_3 (3) ClCH_2COOH (4) $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$ (5) $\text{CH}_3\text{COCOCH}_3$ (6) $\text{CH}_3\text{COOC}_2\text{H}_5$		1
9	Give the classification of hydrocarbons.		1
10	Write short note on position isomerism and chain isomerism		1
11	Give IUPAC nomenclature of following compounds. (1) $\text{HOOC}-\text{COOH}$. (2) $\text{CH}_3-\text{COOCH}_3$ (3) $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$ (4) $\text{CH}_3-\text{CH}_2-\text{CO}-\text{CH}_3$.		1
12	Write structural formula of following. 04 (1) Cyclo Pentane (2) Methoxy butane (3) 2-Hydroxybutanoic acid (4) Salicylic acid		1
13	What is hydrocarbon? Give classification of it.		1
14	Define-Isomerism and explain position isomerism.		1
15	Give the general formula of alkane and alkene.		1
16	Give any two example of chain isomerism.		1
17	Explain position isomerism and functional group isomerism with example.		1
18	Give IUPAC name of the following compounds. (1) HCHO (2) CH_3COOH (3) $\text{CH}_3\text{COCH}_2\text{CH}_3$ (4) $\text{CH}_3\text{COOCH}_2\text{CH}_3$		1
19	Write the structural formula of the following compounds. (1) Cyclopropane (2) Phenol (3) Methyl Benzene (4) Methanoic acid		1
20	Write structural formula of the following organic compounds. (a) Methyl acetate (b) 2-propanone (c) 3-chloro pentanoic acid (d) Cyclopentane		1
21	Write IUPAC name of the following organic compounds (a) CH_3COOH (b) CH_3OCH_3 (c) $\text{CH}_3\text{CH}_2\text{COOCH}_3$ (d) $\text{CH}_3\text{CH}_2\text{OH}$		1
22	Give the types of isomerism		1
23	Give the structure of methanal and cyclo butane		1
24	Write structural formula of the following organic compounds. (1) Ethyl acetate (2) 2,3- dimethyl hexane (3) 1,3-butadiene (4) methoxy methane.		1
25	Write IUPAC name of the following organic compounds. (1) HCOOH (2) $\text{CH}_3-(\text{CH}_2)_6-\text{CH}_3$ (3) HCHO (4) $\text{CH}_3-\text{CH}_2-\text{COOCH}_3$		1
26	Give the general formula of alkynes.		1
27	Define functional group.		1
28	Write structural formula of following compounds. 1) 2-Butanone, 2) Ethanamide, 3) cyclo pentane, 4) 2-propene-1-ol		1
29	Give IUPAC nomenclature of following compounds. 1. $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$, 2. $\text{CH}_3\text{CH}_2\text{CH}(\text{Cl})\text{COOH}$ 3. $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$ 4. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$ 5. $\text{CH}_3\text{COCH}_2\text{COCH}_3$		1

1	Give the criteria for pure organic compound		2
2	Name the different methods for purification of liquids		2
3	Describe the method for purification of aniline.		2
4	Describe method used to determine boiling point of an organic compound		2
5	Write the boiling points of Aniline and nitrobenzene.		2
6	Define sublimation and give any two examples of sublimate compounds.		2
7	Explain crystallization.		2
8	Explain method for detection of melting point of organic solid.		2
9	Give the name of different methods for purification of organic liquids.		2
10	Describe the method for the purification of naphthalene		2
11	Write a short note of simple distillation method.		2
12	Give Name any two compounds that can be purified by sublimation method.		2
13	Explain Simple Distillation method to purify organic liquid.		2
14	Explain sublimation method for organic compound.		2
15	Which element are estimated by carius method?		2
16	Write boiling point of methanol and ethyl acetate.		2
17	Explain fractional distillation method for purification of organic liquid compounds with figure.		2
18	Name the methods for purification of aniline and glycerin.		2
1	Tollen's reagent is prepared by adding ----- into -----		3
2	Explain method for detection of carbon and hydrogen.		3
3	Write the equations for the reactions involved in Lassaigne's test used for detection of sulphur in given organic compound.		3
4	0.147 gm of an organic compound is heated with excess conc. HNO ₃ and AgNO ₃ gave 0.287 gm silver chloride. Find the percentage of chlorine in given compound.		3
5	Write about Lassaigne's test for detection of Nitrogen.		3
6	0.32 gm of an organic substance in a qualitative analysis gave 0.2334 gm of Barium Sulphate. Calculate the percentage of sulphur.		3
7	0.20gm of an organic substance when heated with excess of strong Nitric acid and silver nitrate gave 0.3522gm of Silver iodide. Calculate the percentage of iodine in the compound.		3
8	Explain Vacuum Distillation method.		3
9	Explain Kjeldahl's method for estimation of nitrogen.		3
10	Explain Duma's method for estimation of Nitrogen.		3
11	Explain Carius method for estimation of halogen.		3
12	Describe carius method for estimation of halides in organic compounds.		3
13	Explain lassaigne's test for the detection of nitrogen and Sulphur in an organic compound with equation.		3
14	0.250 gm of an organic compound is heated with excess conc. HNO ₃ and AgNO ₃ gave 0.4550 gm silver iodide. Find the percentage of iodine in given compound.		3
15	Describe carius method for estimation of Sulphur in organic compound.		3
16	What is Lassaigne solution?		3
17	0.6 gm of an organic compounds give on combustion 0.150 gm of water and 0.350 gm of CO ₂ , calculate percentage of carbon and hydrogen.		3
18	0.45 g of an organic compounds give on combustion 0.300 g of water and 0.520 g of carbon dioxide, calculate percentage of carbon and hydrogen.		3
19	0.301 gm of an organic compound is heated with excess conc. HNO ₃ and AgNO ₃ gave 0.282 gm silver bromide. Find the percentage of bromine in given compound.		3

1	Give the general formula of alkanes.		4
2	Write the methods for preparation of ethyl alcohol		4
3	Give the structure of products obtained during the following reactions (1) $\text{CH}_3\text{CH}_2\text{Cl} + \text{alc KOH} = ?$ (2) $\text{CH}_3\text{COCH}_3 + \text{Cl}_2 = ?$ (3) $\text{C}_2\text{H}_5\text{OH} + \text{CH}_3\text{COOH} = ?$ (4) $\text{CH}_2 = \text{CH}_2 + \text{PdCl}_2 + \text{H}_2\text{O} = ?$		4
4	Write the method of preparation, properties and uses of Acetone		4
5	Write Williamsons synthesis of ether.		4
6	Give the structure of products obtained during the following reactions (1) $\text{C}_2\text{H}_5\text{OH} + \text{PCl}_5 = ?$ (2) $\text{CH}_3\text{-CH=CH-CH}_3 + \text{O}_3[\text{Zn}] = ?$ (3) $\text{C}_6\text{H}_5\text{CH}_3 [\text{FeCl}_3/\text{Cl}_2] = ?$ (4) $2\text{CHI}_3 + 6\text{Ag} = ?$		4
7	How will you distinguish between primary secondary and tertiary alcohol by oxidation.		4
8	Write the preparation and uses of Ethanol.		4
9	Write two uses of diethyl ether.		4
10	Write physical properties and uses of Acetic Acid.		4
11	Write physical properties and uses of ethyl acetate.		4
12	Write the chemical properties and uses of Acetic acid.		4
13	Write the preparation, physical properties and uses of methanol.		4
14	Write the preparation, physical properties and uses of acetaldehyde.		4
15	Write the physical and chemical properties of diethyl ether.		4
16	Write the physical and chemical properties of oxalic acid		4
17	Write Wurtz reaction.		4
18	Differentiate between aliphatic and aromatic compound.		4
19	Write one method of preparation, property and use of ethylene		4
20	How will you effect following conversions 1. Acetaldehyde from acetylene 2. Ethyl acetate from acetic acid 3. Ethyl chloride from ethyl alcohol.		4
21	Write short note on Williamson's continuous etherification process		4
22	Write short note on Kolbe's electrolytic reaction.		4
23	Write test to distinguish between primary, secondary and tertiary alcohol.		4
1	Give the structural formula of toluene and naphthalene		5
2	Write the methods of preparations benzene		5
3	Give equation for following conversion (1) Toluene to benzaldehyde (2) Phenol to benzene.		5
4	Give chlorination reaction of toluene.		5
5	How will you convert benzene into toluene?		5
6	Write the structures of Xylene and Naphthalene.		5
7	Write the preparation and uses of Benzoic acid.		5
8	Write the preparation and chemical properties of Phenol.		5
9	Write the structural formula of nitrobenzene and aniline.		5
10	Write any two physical properties of oxalic acid.		5
11	Give any two chemical properties of styrene.		5
12	Write the method of preparation of Nitrobenzene.		5
13	Write physical and chemical properties of benzoic acid.		5
14	Write method of preparation and uses of Toluene		5
15	Write physical and chemical properties of Benzene		5
16	Write short note on Dow's process		5
17	Write the structure of Chloro benzene and Nitro benzene.		5
18	Write any two preparation method of Benzoic acid.		5
19	Write the physical properties and uses of nitrobenzene and aniline.		5
20	Explain method of preparation and uses of benzaldehyde		5

21	Write chemical properties and uses of benzoic acid		5
22	Write any two preparation method of salicylic acid.		5
23	Write the preparation, physical properties and uses of toluene.		5
24	Write the preparation, physical properties and uses of phenol.		5
25	Write physical and chemical properties of nitrobenzene.		5
26	Write physical and chemical properties of benzoic acid.		5
1	Write decarboxylation reaction		6
2	Give the name of reagents for nitration		6
3	Explain Friedel craft's alkylation reaction with suitable example		6
4	Define unit process. Explain. Name the reagent used in nitration.		6
5	Write preparation of nitrobenzene in the laboratory.		6
6	Give equation for following conversion (1) Benzene to aniline, (2) Ethanol to acetic acid.		6
7	Write a note on diazotization.		6
8	Write a short note on Friedel-Craft reaction.		6
9	Give equation for conversion of following. (1) Benzene to Benzaldehyde. (2) Nitrobenzene to aniline.		6
10	What are unit processes? Explain Sulphonation Unit process.		6
11	Write a short note on—(1) Tollen reagent Test (2) Reimer Tiemann reaction		6
12	What is Diazotization?		6
13	Give chemical reaction for the following conversion (a) Benzene to Toluene (b) Toluene to Benzoic acid		6
14	Define the term Unit process. Explain nitration and halogenations unit process		6
15	Name reagents for nitration and sulphonation unit process.		6
1	What are carbohydrates? Give the classification of carbohydrate in detail.		7
2	What are carbohydrates give examples.		7
3	Give classification of Soaps and Detergent.		7
4	Write the classification of carbohydrates.		7
5	Explain classification of carbohydrate		7
6	Give the classification of soap and detergent.		7
7	Give the classification of soap and detergent with example.		7
1	What is Dye? Give example.		8
2	Define Chromophore and Auxochrome.		8
3	Explain difference between dye and color.		8
4	Define soap and detergent.		8
5	Give classification of dyes based on the type of application		8
6	Write classification of soaps and detergent with suitable example of each class.		8
7	Define Chromogen, Chromophore and Auxochrome		8
8	Give classification of dyes base on structure.		8
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