

ORGANIC CHEMISTRY

Q.1) The IUPAC name of  is

- [1] neonane
- [2] 3-ethylpentane
- [3] tetra ethyl methane
- [4] 3,3-diethylpentane

Q.2) Chlorination is an example of

- [1] addition reaction
- [2] substitution reaction
- [3] elimination reaction
- [4] rearrangement reaction

Q.3) Heterolysis of C-Cl bond leads to the formation of

- [1] carbanion
- [2] carbocation
- [3] carbon free radical
- [4] carbene

Q.4) Which molecule has highest dipole moment?

- [1] CH_3F
- [2] CH_3Cl
- [3] CH_3Br
- [4] CH_3I

Q.5) Presence of Chlorine in an organic compound shows

- [1] $-\text{I}$ effect
- [2] $+\text{I}$ effect
- [3] Electromeric effect
- [4] Mesomeric effect

Q.6) Which of the following is a nucleophile?

- [1] AlCl_3
- [2] H_3O^+

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[3] BF_3

[4] CN^-

Q.7) A fuel has the same knocking property as a mixture of 70% iso-octane and 30% n-heptane by volume. The octane number of the fuel is

[1] 100

[2] 70

[3] 30

[4] 40

Q.8) Number of carbon atoms in gasoline ranges from

[1] $\text{C}_3\text{-C}_5$

[2] $\text{C}_8\text{-C}_{12}$

[3] $\text{C}_6\text{-C}_{10}$

[4] $\text{C}_{10}\text{-C}_{16}$

Q.9) Ethyne upon addition with water in presence of HgSO_4 and H_2SO_4 gives

[1] Propanone

[2] Ethanal

[3] Ethanol

[4] Diethyl ether

Q.10) Ethylene and acetylene can be distinguished by following reagent:

[1] alkaline KMnO_4

[2] bromine solution in CCl_4

[3] conc. H_2SO_4

[4] ammoniacal Cu_2Cl_2

Q.11) Hydrolysis of calcium carbide produces

[1] methane

[2] ethane

[3] acetylene

[4] ethylene

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Q.12) What are the respective products of electrolysis of sodium salt of ethanoic acid, succinic acid and maleic acid?

- [1] ethane, ethene and ethyne
- [2] ethane, propane and ethyne
- [3] ethane, propyne and propene
- [4] ethane, ethanol and ethanal

Q.13) Alkenes are isomeric with

- [1] alkane
- [2] cycloalkane
- [3] alkyne
- [4] arene

Q.14) Saytzeff rule is invalid to

- [1] primary alcohol
- [2] secondary alcohol
- [3] tertiary alcohol
- [4] all of above

Q.15) Ethane is obtained from ethylene by

- [1] Wurtz reaction
- [2] Darzen's process
- [3] Sabatier-Senderen's reaction
- [4] Dehydrogenation

Q.16) Which of the following give methane on hydrolysis?

- [1] Fe_3O_4
- [2] Al_2O_3
- [3] CaC_2
- [4] Al_4C_3

Q.17) Find X and Y in the reaction: $\text{C}_2\text{H}_2 + \text{H}_2 \xrightarrow[\text{BaSO}_4]{\text{Pd, quinoline}} \text{X} \xrightarrow{\text{O}_2, \text{Ag}} \text{Y}$

- [1] Ethane and Benzene
- [2] Ethene and Ethylene oxide

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[3] Ethyne and Ethanol

[4] Ethene and ethylene glycol

Q.18) 2 – methylpropene $\xrightarrow{O_3} A \xrightarrow{Zn/H_2O} B$, what is B?

[1] Acetone and Propanone

[2] Formaldehyde and Propanal

[3] Acetone and Formaldehyde

[4] Formaldehyde and Propanone

Q.19) Quality of diesel is measured in terms of Cetane Number. Cetane is

[1] naphthalene

[2] hexadecane

[3] n-octane

[4] ethyl heptane

Q.20) Metamerism is not shown by:

[1] Alcohol

[2] Ether

[3] Ester

[4] Amine

Q.21) In Friedel Crafts acylation, electrophile is

[1] Carbonium ion

[2] Carbanion

[3] Acyl Chloride

[4] Acylium ion

Q.22) Nitration reaction occurs quickly in

[1] Benzene

[2] Toluene

[3] Phenol

[4] Nitrobenzene

Q.23) The electrophile in sulphonation of benzene is

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[1] SO_3^+

[2] SO_3

[3] HSO_3

[4] HSO_4^-

Q.24) Typical reaction of aromatic compound is

[1] EAR

[2] NAR

[3] ESR

[4] NSR

Q.25) Which is correct for deactivation of benzene ring?

[1] $-\text{OH}>-\text{NO}_2>-\text{CN}>-\text{CH}_3$

[2] $-\text{OH}<-\text{NO}_2>-\text{CN}>-\text{CH}_3$

[3] $-\text{OH}>-\text{NO}_2>-\text{CN}<-\text{CH}_3$

[4] $-\text{OH}<-\text{NO}_2<-\text{CN}>-\text{CH}_3$

Q.26) Chloroform when reacts with Zn dust and water and Zn dust and HCl respectively forms

[1] CH_4 and CH_2Cl_2

[2] CH_2Cl_2 and CCl_4

[3] CH_2Cl_2 and CH_4

[4] CCl_4 and CH_2Cl_2

Q.27) When propylene reacts with HCl in presence of *Organic peroxide*, it follows

[1] Markonikov's rule

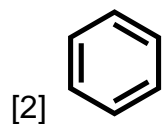
[2] Anti-Markonikov's rule

[3] Chain reaction

[4] Free radical reaction

Q.28) When a given organic compound is treated with propanone along with base potassium hydroxide, it results to form a hypnotic product. What is given compound?

[1] $\text{CH}_3\text{CH}_2\text{OH}$



[3] CHCl_3

[4] DDT

Q.29) $\text{C}_6\text{H}_6 \xrightarrow{\text{HCl}/\text{O}_2} \text{C}_6\text{H}_5\text{Cl} + \text{H}_2\text{O}$, This reaction is called

[1] Gattermann reaction

[2] Sandmayer's reaction

[3] Raschig process

[4] Schiemann reaction

Q.30) $\text{P} \xrightarrow{\text{alc.KCN}} \text{CH}_3\text{CH}_2\text{CN} \xrightarrow{\text{Stephen reduction}} \text{Q}$, P=? and Q=?

[1] Bromopropane and ethanal

[2] Bromoethane and ethanal

[3] Bromoethane and propanal

[4] Bromoethane and propanamide

Q.31) Iodoform test is given by

[1] $\text{CH}_3\text{-CO-OH}$

[2] $\text{CH}_3\text{-OH}$

[3] $\text{CH}_3\text{-CH}_2\text{-OH}$

[4] Both a and c

Q.32) Drinking of which alcohol may cause blindness

[1] Wood spirit

[2] Ethanol

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[3] absolute alcohol

[4] rectified alcohol

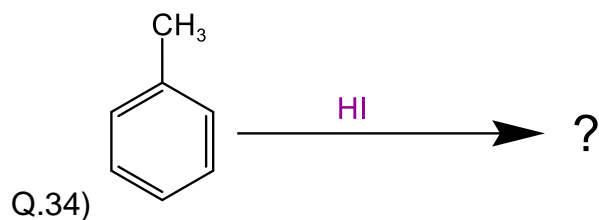
Q.33) Formation of alcohol and carboxylic acid from ester is an example of

[1] Esterification

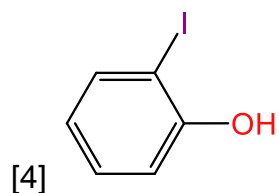
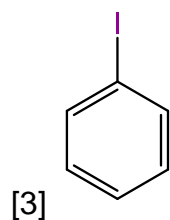
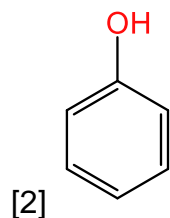
[2] Trans-esterification

[3] Ester-hydrolysis

[4] Oxidation



[1] CH_3OH



Q.35) Which of the following does not form dative bond with ether?

[1] BF_3

[2] AlCl_3

[3] RMgX

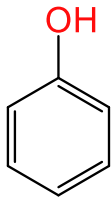
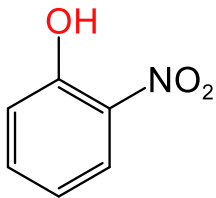
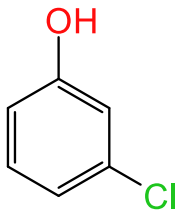
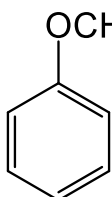
[4] NaBH_4

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Q.36) The major product obtained when tert-butyl chloride is reacted with sodium ethoxide is

- [1] Ethane
- [2] Diethyl ether
- [3] 2-methyl-1-propene
- [4] tert-Butyl methyl ether

Q.37) Which is most acidic among the following?

- [1] 
- [2] 
- [3] 
- [4] 

Q.38) Phenol and benzoic acid can be distinguished by

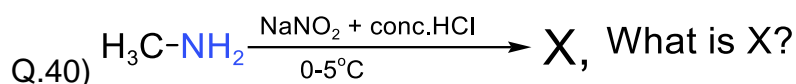
- [1] NaHCO_3
- [2] Tollen's reagent
- [3] Bayer's reagent
- [4] CuSO_4

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Q.39)

- [1] Cresol, Sodium benzoate
- [2] Phenol, Sodium benzoate
- [3] Acetone, Benzoic acid
- [4] Phenol, No reaction



- [1] CH_3OH
- [2] CH_3OCH_3
- [3] CH_3ONO
- [4] All of above

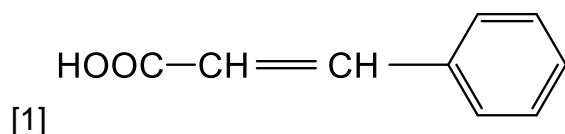
Q.41) Which is the most suitable technique to separate formaldehyde and benzaldehyde?

- [1] Fehling's solution
- [2] Tollen's solution
- [3] $\text{I}_2 + \text{NaOH}$
- [4] NH_3

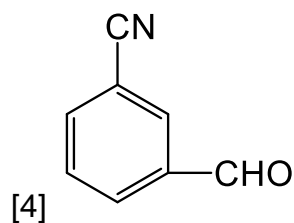
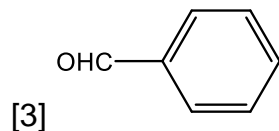
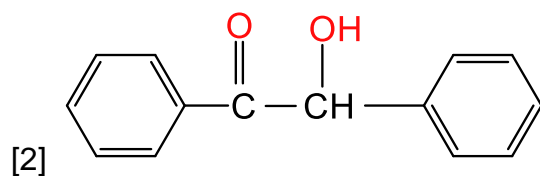
Q.42) The reagent used to detect sugar in urine is

- [1] Bayer's reagent
- [2] Grignard's reagent
- [3] Schiff's reagent
- [4] Benedict's solution

Q.43) The product of Rosenmund's reaction is heated with alc. KCN which results the formation of



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Q.44) The product of Gattermann-Koch reaction and Ozonolysis of ethene are treated with conc. NaOH, Which of the following is not obtained as product?

- [1] HCOONa
- [2] C₇H₆O
- [3] H₂O
- [4] CH₃OH

Q.45) The reaction of formic acid with conc. H₂SO₄ gives

- [1] CO
- [2] CO₂
- [3] Oxalic acid
- [4] Glycerol

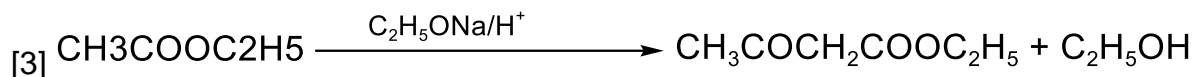
Q.46) Which of the following is amphoteric?

- [1] Picric acid
- [2] Ethanamine
- [3] Ethanamide
- [4] Ethanoyl chloride

Q.47) Which is/are example(s) of Hunsdiecker reaction?

- [1] RCOOAg + Cl₂ → RCl + CO₂ + AgCl
- [2] 2RCOOAg + I₂ → RCOOR + CO₂ + 2AgI

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[4] Both a and b

Q.48) Nitrobenzene when treated with Glucose in presence of base yields

[1] Aniline

[2] Azobenzene

[3] Hydrazobenzene

[4] Azoxybenzene

Q.49) Which of the following statement is true?

[1] When nitrobenzene is heated with alkali, meta derivative is formed.

[2] When nitrobenzene is heated with alkali, ortho and para derivative are formed.

[3] Nitrobenzene responds Friedel-Crafts reaction.

[4] Nitrobenzene is called oil of artificial wintergreen.

Q.50) Arrange the order of basicity in aqueous medium.

[1] Ammonia > Methylamine > Ethylamine > Aniline

[2] Ammonia < Methylamine < Ethylamine > Aniline

[3] Ammonia > Methylamine > Ethylamine < Aniline

[4] Ammonia < Methylamine < Ethylamine < Aniline

Q.51) Primary and secondary amines cannot be distinguished by:

[1] Nitrous acid test

[2] Hisenberg test

[3] DNP test

[4] Both b and c

Q.52) Gabriel Phthalimide synthesis gives

[1] Primary amine and secondary amine

[2] Primary amine but not Secondary amine

[3] Secondary amine and tertiary amine

[4] Aniline and primary amine only

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Q.53) Aniline is warmed with chloroform and alcoholic caustic alkali. Offensive odor is due to formation of

- [1] Phenyl cyanide
- [2] Methyl cyanide
- [3] Amino nitrile
- [4] Phenyl carbylamine

Q.54) Cellulose is the polymer of

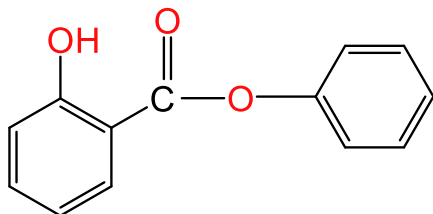
- [1] Maltose
- [2] Fructose
- [3] β -glucose
- [4] α -glucose

Q.55) Bordeaux mixture contains

- [1] DDT
- [2] Zinc phosphate
- [3] Zinc sulphate
- [4] Copper sulphate

Q.56) Which one is chromophore?

- [1] -C=C-
- [2] -NO_2
- [3] N_2
- [4] -CN



Q.57) Name the compound indicated by above molecular diagram.

- [1] Aspirin
- [2] Savlon

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[3] Salol

[4] Paracetamol

Q.58) Biuret test is done in order to detect

[1] Sugar

[2] Protein

[3] Fat

[4] Oils

Q.59) Na on fusion with organic compound containing nitrogen element forms

[1] NaONO

[2] Na₄C

[3] NaCN

[4] NaNO₂