CLASS XI CHE CH: 8

SET 5

1.

Who is regarded as the father of organic chemistry?
a) Berzelius b) Wöhler c) Kekulé d) Liebig

2.

The first organic compound prepared in the laboratory was –
a) Methane b) Urea c) Glucose d) Ethanol

3.

Wöhler synthesized urea from –
a) Ammonium cyanate b) Ammonia and CO_2 c) Acetamide d) Ammonium carbonate

4.

Vital force theory was proposed by –
a) Wöhler b) Berzelius c) Kekulé d) Dalton

5.

The catenation property of carbon is due to –
a) High electronegativity b) Small size and tetravalency c) High atomic mass d) Large size

6.

The tetrahedral structure of methane was proposed by –
a) Wöhler b) van't Hoff and Le Bel c) Kekulé d) Dalton

7.

Hybridisation in ethyne is –
a) sp^3 b) sp^2 c) sp d) dsp^2

8.

In ethane, each carbon is –
a) sp^3 b) sp^2 c) sp d) dsp^2

9.

In ethene, each carbon is –
a) sp^3 b) sp^2 c) sp d) dsp^2

CLASS XI CHE CH: 8

10.

The number of σ and π bonds in benzene is –
a) 6σ, 3π b) 9σ, 3π c) 12σ, 3π d) 6σ, 6π

11.

The bond angle in CH_4 is –
a) 90° b) 120° c) 109.5° d) 180°

12.

Which of the following is an open-chain compound?
a) Benzene b) Cyclohexane c) Propane d) Pyridine

13.

Which compound contains both oxygen and nitrogen atoms?
a) Nitrobenzene b) Toluene c) Phenol d) Acetone

14.

The compound C_2H_5OH belongs to the class –
a) Alcohol b) Aldehyde c) Acid d) Ketone

15.

The compound CH_3COCH_3 is called –
a) Ethanal b) Propanone c) Propanal d) Acetaldehyde

16.

The compound CH_3CHO is –
a) Acetaldehyde b) Acetone c) Ethanol d) Methanal

17.

The general formula of alkyne is –
a) CnH_2n+_2 b) CnH_2n c) $CnH_2n–_2$ d) CnH_2nO

18.

The IUPAC name of CH_3COOH is –
a) Formic acid b) Ethanoic acid c) Acetic acid d) Propanoic acid

19.

CLASS XI CHE CH: 8

An isomer of ethanol is –
a) Methanol b) Dimethyl ether c) Ethene d) Propanol

20.

Structural isomers have –
a) Same molecular formula, different structure b) Different molecular formula c) Same structure d) None

21.

Geometrical isomerism is shown by –
a) Alkanes b) Alkenes c) Alkynes d) Aromatics

22.

The compound $CH_3CH=CHCH_3$ shows –
a) Chain isomerism b) Geometrical isomerism c) Functional isomerism d) Metamerism

23.

Functional group isomerism is shown by –
a) Alcohols and ethers b) Aldehydes and ketones c) Both a and b d) None

24.

Homolytic fission gives rise to –
a) Ions b) Radicals c) Atoms d) None

25.

Heterolytic fission gives rise to –
a) Ions b) Free radicals c) Atoms d) Molecules

26.

A positively charged carbon species is –
a) Carbanion b) Carbocation c) Free radical d) Nucleophile

27.

The hybridisation of carbon in CH_3^+ is –
a) sp^3 b) sp^2 c) sp d) None

28.

A negatively charged carbon species is –
a) Carbanion b) Carbocation c) Free radical d) Electrophile

CLASS XI CHE CH: 8

29.

Carbanion is stabilised by –
a) –I groups b) +I groups c) Alkyl groups d) Resonance

30.

Carbocation is stabilised by –
a) +I groups b) –I groups c) None d) Both

31.

An electrophile is –
a) Electron loving b) Electron donating c) Electron neutral d) Protonated base

32.

A nucleophile is –
a) Electron loving b) Electron rich c) Electron poor d) Proton rich

33.

Which of the following is an electrophile?
a) NO_2^+ b) OH^- c) NH_3 d) CN^-

34.

Which of the following is a nucleophile?
a) H^+ b) NO_2^+ c) CN^- d) $AlCl_3$

35.

Arrow notation in mechanisms shows movement of –
a) Atoms b) Electrons c) Protons d) Bonds

36.

Inductive effect operates through –
a) σ-bonds b) π-bonds c) Both d) None

37.

Resonance effect operates through –
a) σ-bonds b) π-bonds c) Both d) None

38.

CLASS XI CHE CH: 8

+I effect decreases with –
a) Distance b) Mass c) Electronegativity d) Resonance

39.

–I effect is shown by –
a) $–CH_3$ b) $–NO_2$ c) –OH d) $–NH_2$

40.

+R effect is shown by –
a) –OH b) $–NO_2$ c) –CN d) –COOH

41.

–R effect is shown by –
a) –OH b) $–NO_2$ c) $–NH_2$ d) –OR

42.

Electromeric effect is temporary displacement of –
a) σ-electrons b) π-electrons c) Both d) None

43.

Hyperconjugation involves delocalisation of –
a) σ-electrons b) π-electrons c) n-electrons d) Lone pairs

44.

Resonance structures differ only in –
a) Position of electrons b) Type of atoms c) Bond lengths d) Molecular mass

45.

Purification of volatile solids is done by –
a) Crystallisation b) Sublimation c) Distillation d) Extraction

46.

Camphor is purified by –
a) Sublimation b) Filtration c) Distillation d) None

47.

Distillation separates liquids based on –
a) Density b) Boiling point c) Solubility d) Colour

CLASS XI CHE CH: 8

48.

Steam distillation is useful for –
a) High-boiling, water-insoluble liquids b) Solids c) Gases d) None

49.

Crystallisation is used for purification of –
a) Solids b) Liquids c) Gases d) None

50.

The purity of organic compound is confirmed by –
a) Melting/Boiling point b) Colour c) Odour d) Density

ANSWERS – SET 5

1-b	2-b	3-a	4-b	5-b	6-b	7-c	8-a	9-b	10-b
11-c	12-c	13-a	14-a	15-b	16-a	17-c	18-b	19-b	20-a
21-b	22-b	23-c	24-b	25-a	26-b	27-b	28-a	29-a	30-a
31-a	32-b	33-a	34-c	35-b	36-a	37-b	38-a	39-b	40-a
41-b	42-b	43-a	44-a	45-b	46-a	47-b	48-a	49-a	50-a