

CLASS XI CHE CH: 8

SET 3

1.

The hybridisation of carbon in ethyne (C_2H_2) is –

- a) sp^3 b) sp^2 c) sp d) dsp^2

2.

In benzene, all C–C bonds are –

- a) Equal b) Unequal c) Single d) Double

3.

The correct order of bond length is –

- a) $C-C > C=C > C\equiv C$ b) $C\equiv C > C-C > C=C$ c) $C=C > C\equiv C > C-C$ d) All equal

4.

sp hybrid orbital has ____ % s-character.

- a) 25 b) 33 c) 50 d) 75

5.

Which of the following is most electronegative?

- a) $sp^3 C$ b) $sp^2 C$ c) $sp C$ d) All same

6.

In π bond, overlap is –

- a) End-to-end b) Sidewise c) No overlap d) Hybrid

7.

The compound $CH_3CH=CH_2$ contains –

- a) 3 σ , 1 π b) 8 σ , 1 π c) 6 σ , 2 π d) 5 σ , 1 π

8.

Rotation about double bond is restricted due to –

- a) Weak σ bond b) Strong π bond c) Both d) Lone pairs

9.

In bond-line formula, a line junction represents –

- a) Hydrogen b) Carbon c) Oxygen d) None

CLASS XI CHE CH: 8

10.

Which represents condensed formula of propanol?

- a) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ b) $\text{CH}_3\text{CH}_2\text{CHO}$ c) $\text{CH}_3\text{CH}_2\text{COOH}$ d) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$

11.

In wedge and dash representation, a solid wedge means –

- a) Bond in plane b) Bond coming out of plane c) Bond going behind d) None

12.

The dashed wedge indicates –

- a) Bond in plane b) Bond coming out c) Bond going behind the plane d) π bond

13.

Which model shows both size and shape of atoms?

- a) Framework b) Ball-and-stick c) Space-filling d) None

14.

Cyclohexane is an example of –

- a) Aromatic b) Alicyclic c) Aliphatic d) None

15.

Furan is an example of –

- a) Homocyclic b) Heterocyclic c) Alicyclic d) Aromatic

16.

Tropone is an example of –

- a) Benzenoid compound b) Non-benzenoid aromatic compound c) Alicyclic d) Heterocyclic

17.

The functional group $-\text{COOH}$ is called –

- a) Carboxyl b) Carbonyl c) Aldehydic d) Hydroxyl

18.

The general formula of alkenes is –

- a) C_nH_{2n} b) $\text{C}_n\text{H}_{2n+2}$ c) $\text{C}_n\text{H}_{2n-2}$ d) $\text{C}_n\text{H}_{2n}\text{O}_2$

19.

CLASS XI CHE CH: 8

In IUPAC naming, prefix indicates –

- a) Functional group b) Substituents c) Carbon atoms d) None

20.

The compound $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ is named –

- a) Butane b) Hexane c) Pentane d) Heptane

21.

The correct IUPAC name of isopentane is –

- a) 2-Methylbutane b) 3-Methylbutane c) 2,2-Dimethylpropane d) 3-Ethylbutane

22.

The functional group $-\text{CO}-$ is –

- a) Aldehyde b) Ketone c) Alcohol d) Ether

23.

Which compound contains both aldehyde and alcohol groups?

- a) Hydroxybutanal b) Hydroxybutanoic acid c) Propanol d) Ethanone

24.

Principal functional group is decided by –

- a) Highest molecular mass b) Order of preference c) Number of atoms d) First in name

25.

Which of the following has highest priority?

- a) $-\text{OH}$ b) $-\text{COOH}$ c) $-\text{CHO}$ d) $-\text{NH}_2$

26.

If both $\text{C}=\text{C}$ and $\text{C}\equiv\text{C}$ are present, the compound name ends with –

- a) $-\text{ene-yne}$ b) $-\text{yne-ene}$ c) $-\text{ane}$ d) $-\text{al}$

27.

The compound $\text{CH}_3\text{COCH}_2\text{COCH}_3$ is –

- a) Hexane-2,4-dione b) Pentane-2,4-dione c) Butane-2,4-dione d) Heptane-3-one

28.

The compound with formula $\text{CH}_3\text{CH}_2\text{COOH}$ is named –

- a) Propanol b) Propanoic acid c) Butanoic acid d) Ethanoic acid

CLASS XI CHE CH: 8

29.

Which one is an aromatic compound?

- a) Propane b) Cyclohexane c) Benzene d) Ethene

30.

1,3-Dibromobenzene is also called –

- a) o-Dibromobenzene b) m-Dibromobenzene c) p-Dibromobenzene d) None

31.

When more than two substituents are present on benzene, numbering follows –

- a) Highest mass b) Alphabetical order c) Random order d) None

32.

Phenyl group is derived from –

- a) Benzene b) Ethane c) Cyclohexane d) Propane

33.

Compounds having same molecular formula but different structures are called –

- a) Isomers b) Isotopes c) Polymers d) Allotropes

34.

The compound C_3H_6O may represent –

- a) Aldehyde or ketone b) Alcohol or acid c) Acid or ether d) Amine or acid

35.

In $C_4H_{10}O$, possible functional isomers are –

- a) Alcohol and ether b) Aldehyde and ketone c) Amine and amide d) Acid and ester

36.

Heterolytic bond fission produces –

- a) Ions b) Free radicals c) Atoms d) Neutrons

37.

Homolytic bond fission produces –

- a) Ions b) Radicals c) Ions and radicals d) None

38.

CLASS XI CHE CH: 8

Carbocation has configuration –

- a) sp^3 b) sp^2 c) sp d) dsp^2

39.

Carbanion is –

- a) sp^3 b) sp^2 c) sp d) dsp^2

40.

A species having an unpaired electron is –

- a) Radical b) Ion c) Cation d) Anion

41.

Electrophile is a species that –

- a) Accepts electron pair b) Donates electron pair c) Neutral d) None

42.

Nucleophile is –

- a) Electron deficient b) Electron rich c) Neutral d) None

43.

Example of electrophile is –

- a) H^+ b) Cl^- c) NH_3 d) OH^-

44.

Example of nucleophile is –

- a) NO_2^+ b) BF_3 c) NH_3 d) H^+

45.

The movement of a pair of electrons is shown by –

- a) Curved arrow b) Straight line c) Broken line d) Dashed arrow

46.

The inductive effect operates through –

- a) π -bond b) σ -bond c) Both d) None

47.

The resonance effect operates through –

- a) σ -bond b) π -bond c) Ionic bond d) None

CLASS XI CHE CH: 8

48.

+R effect is shown by –

- a) $-\text{NH}_2$ b) $-\text{NO}_2$ c) $-\text{COOH}$ d) $-\text{CN}$

49.

–R effect is shown by –

- a) $-\text{OH}$ b) $-\text{NH}_2$ c) $-\text{NO}_2$ d) $-\text{OR}$

50.

Delocalisation of σ -electrons of C–H bond into π -system is called –

- a) Resonance b) Hyperconjugation c) Electromeric effect d) Inductive effect
-

ANSWERS – SET 3

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