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1.

The ability of carbon to form long chains is known as –
a) Isomerism b) Catenation c) Polymerisation d) Substitution

2.

Which of the following is not a hydrocarbon?
a) CH_4 b) C_2H_6 c) CH_3OH d) C_3H_8

3.

The bond angle in ethene (C_2H_4) is approximately –
a) 109.5° b) 120° c) 180° d) 90°

4.

The bond angle in ethyne (C_2H_2) is –
a) 90° b) 109.5° c) 120° d) 180°

5.

In sp^2 hybridisation, one s and how many p orbitals mix?
a) One b) Two c) Three d) None

6.

Which of the following shows sp^3 hybridisation?
a) CH_4 b) C_2H_2 c) C_2H_4 d) CO_2

7.

Which of the following has a triple bond?
a) Ethane b) Ethene c) Ethyne d) Propene

8.

Which compound is aromatic?
a) Cyclohexane b) Benzene c) Propane d) Cyclopentane

9.

An aliphatic compound is one which –
a) Contains benzene ring b) Does not contain benzene ring c) Contains O atom d) Contains N atom

10.

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The formula C_nH_{2n} represents –
a) Alkane b) Alkene c) Alkyne d) Alkyl halide

11.

C_nH_{2n-2} is the general formula for –
a) Alkane b) Alkene c) Alkyne d) Alkadiene

12.

The compound $CH_3CH_2CH_2CH_3$ is –
a) Butane b) Pentane c) Propane d) Hexane

13.

The molecular formula of benzene is –
a) C_6H_6 b) C_6H_{12} c) C_6H_{14} d) C_7H_8

14.

The molecular formula of toluene is –
a) C_6H_6 b) C_7H_8 c) C_6H_{12} d) C_8H_{10}

15.

The functional group –COOH is found in –
a) Aldehydes b) Ketones c) Carboxylic acids d) Alcohols

16.

The functional group –CO– is present in –
a) Ketones b) Alcohols c) Ethers d) Acids

17.

The compound CH_3COOH is –
a) Methanol b) Ethanoic acid c) Formaldehyde d) Acetone

18.

The suffix used for naming alcohols is –
a) –al b) –one c) –ol d) –oic acid

19.

The prefix for four carbon atoms is –
a) Meth- b) Eth- c) Prop- d) But-

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20.

The compound $(CH_3)_3C–OH$ is –
a) 1° alcohol b) 2° alcohol c) 3° alcohol d) 4° alcohol

21.

The compound $CH_3CH_2NH_2$ belongs to –
a) Alcohols b) Amines c) Ketones d) Acids

22.

The formula of acetamide is –
a) CH_3COCH_3 b) CH_3CONH_2 c) CH_3COOH d) CH_3CHO

23.

The compound CH_3OCH_3 is an –
a) Ether b) Alcohol c) Aldehyde d) Acid

24.

The simplest hydrocarbon is –
a) Ethane b) Methane c) Propane d) Ethene

25.

An aromatic compound containing one $–NO_2$ group is called –
a) Nitrobenzene b) Aniline c) Phenol d) Benzaldehyde

26.

C_2H_6 and C_3H_8 belong to the same –
a) Series b) Family c) Homologous series d) Category

27.

Which of the following is an example of chain isomerism?
a) Butane and isobutane b) Ethane and ethene c) Methane and ethyne d) Ethane and propane

28.

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

29.

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Which type of bond fission forms ions?
a) Homolytic b) Heterolytic c) Both d) None

30.

Homolytic fission produces –
a) Free radicals b) Cations c) Anions d) None

31.

The carbon atom of methyl carbocation (CH_3^+) is –
a) sp^3 b) sp^2 c) sp d) dsp^2

32.

Carbanion is formed by –
a) Gain of electron b) Loss of electron c) Sharing of electron d) None

33.

Carbanion is stabilised by –
a) Electron donating groups b) Electron withdrawing groups c) Alkyl groups d) Hyperconjugation

34.

Electrophiles are –
a) Electron donors b) Electron acceptors c) Both d) None

35.

Nucleophiles are –
a) Electron deficient b) Electron rich c) Positive ions d) None

36.

Example of electrophile is –
a) Cl^- b) OH^- c) H^+ d) NH_3

37.

Example of nucleophile is –
a) H^+ b) NO_2^+ c) Cl^- d) $AlCl_3$

38.

The inductive effect is transmitted through –
a) π bonds b) σ bonds c) Both d) Ionic bonds

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39.

The resonance effect is transmitted through –
a) σ bonds b) π bonds c) Ionic bonds d) None

40.

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

41.

–I effect is shown by –
a) –Cl b) $–CH_3$ c) $–C_2H_5$ d) –OH

42.

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

43.

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

44.

The temporary shift of π-electrons in presence of reagent is called –
a) Inductive effect b) Resonance c) Electromeric effect d) Hyperconjugation

45.

When π-electrons are completely transferred towards attacking reagent, it shows –
a) +E or –E effect b) +I effect c) –I effect d) None

46.

Resonance structures differ only in –
a) Position of nuclei b) Number of atoms c) Position of electrons d) Molecular mass

47.

The delocalisation of σ-electrons of C–H bond in conjugation is –
a) Resonance b) Hyperconjugation c) Inductive effect d) Electromeric effect

48.

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Sublimation is used to purify –
a) Camphor b) Sugar c) Salt d) Oil

49.

Steam distillation is used for –
a) Water-insoluble, volatile liquids b) Solids c) Non-volatile compounds d) Salts

50.

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

ANSWERS – SET 4

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