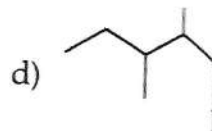
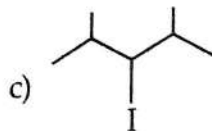
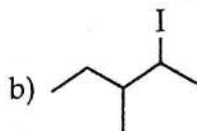
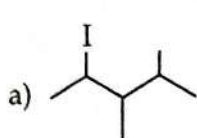


Multiple Choice Questions

Structural representation of organic molecules, Bonding in carbon compounds and kinds of Carbon and Hydrogen atoms

[MHT-CET 2019]

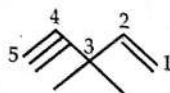
1. The bond line formula of 1-iodo - 2, 3 - dimethyl pentane is.



2. The number of pi bonds present in benzoic acid molecules is
a) 5 b) 4 c) 6 d) 3
3. The number of σ and π bonds in 2 - Formyl benzoic acid are respectively.
a) 12,5 b) 14,3 c) 10,3 d) 17,5
4. What is the number of sigma (σ) and pi (π) bonds respectively in a molecule bromobenzene?
a) Seven and three b) Thirteen and three
c) Six and three d) Twelve and three
5. How many 3° carbon atoms are present in 1, 4 - dibromo - 2 methyl pentane?
a) 2 b) 4 c) 3 d) 1

[MHT-CET 2020]

6. How many pi bonds and sigma bonds are present in the following molecules?



- a) 2π , 17σ - bonds b) 3π , 17σ - bonds c) 5π , 14σ - bonds d) 3π , 16σ - bonds
7. How many primary, secondary and tertiary carbon atoms respectively are present in isobutane?
a) 3, 0 and 1 b) 3, 1 and 0 c) 0, 1 and 3 d) 1, 0 and 3
8. Number of primary carbon atoms present in 3 - Ethyl - 2, 4 - dimethylheptane is
a) 7 b) 4 c) 5 d) 3
9. Identify the number of π bonds present in salicylaldehyde.
a) 4 b) 3 c) 1 d) 2

[MHT-CET 2021]

10. How many π electrons are present in naphthalene to decide its aromaticity?
a) 7 b) 10 c) 8 d) 3
11. What is the number of π electrons present in pyridine?
a) 4 b) 2 c) 8 d) 6

Classification of organic compounds and Homologous series

[MHT-CET 2020]

12. Which of the following statements is true for pyran?
- Molecular formula of pyran is C_5H_5S .
 - It is a homocyclic compound
 - It is heterocyclic with oxygen atom in ring.
 - It is saturated aliphatic compound.

[MHT-CET 2021]

13. Which molecule from following contains sulphur atom in its ring?
- Furan
 - Pyrrole
 - Pyridine
 - Thiophene
14. Identify the number of carbon atoms and number of oxygen atoms respectively present in pyran molecules.
- 6 and 1
 - 5 and 2
 - 4 and 2
 - 5 and 1
15. Which molecules from the following contain oxygen atom in a ring?
- Tetrahydrofuran
 - Pyrrole
 - Thiophene
 - Piperidine
16. Identify total number of carbon atoms present in undecane.
- 9
 - 11
 - 10
 - 20
17. Which among the following compounds is NOT a carbocycl 1° compound?
- Benzene
 - Napthalene
 - Pyridine
 - Cyclopentane
18. What is the number of $-CH_2$ groups present in dodecane?
- 12
 - 10
 - 15
 - 13
19. Which of the following statements about tropone is true?
- It is heterocyclic having molecular formula $C_5H_{10}O$
 - It is a benzoid having molecular formula $C_{10}H_8O$
 - It is non-benzoid having molecular formula C_7H_6O
 - It is heterocyclic having molecular formula C_7H_6O .
20. Identify the hetero atom and number of double bonds respectively present in furan.
- S, 2
 - O, 2
 - N, 2
 - O, 1
21. Identify the molecular formula of pyridine from following :
- $C_5H_{11}N$
 - C_4H_4S
 - C_4H_4O
 - C_5H_5N

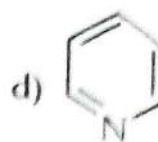
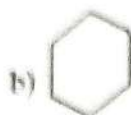
[MHT-CET 2022]

22. What is the number of primary carbon atoms in the compound?



- 2
 - 1
 - zero
 - 3
23. Identify non-benzoid aromatic compound from the following.
- Tropone
 - Napthalene
 - Benzene
 - Phenol

24. Which among the following is heterocyclic aromatic compound?



25. Identify heterocyclic compound from following.

a) Napthalene

b) Cyclobutane

c) Cyclohexane

d) Thiophene

Homologous series and Naming of organic compounds,
Functional groups in organic compounds

[MHT-CET 2019]

26. The IUPAC name of $\text{C}_6\text{H}_5 - \underset{\text{CH}_3}{\text{C}} = \text{CH} - \text{CHO}$ is

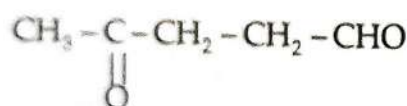
a) 2 - phenylbut - 2 - en - 4 - al

b) 3 - methyl - 3 - phenylprop - 1 - en -

c) 3 - phenylbut - 2 - enal

d) 3 - methyl - 3 - phenylprop - 2 - enal

27. The IUPAC name of



a) 1 - Formylbutane - 3 - one

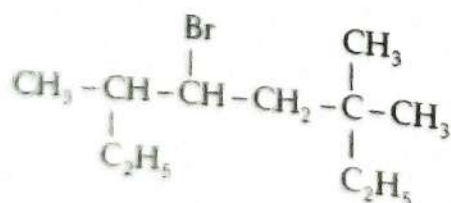
b) 2 - oxopentanal

c) 4 - Formylbutan - 2 - one

d) 4 - oxopentanal

[MHT-CET 2020]

28. IUPAC name of the following compound is



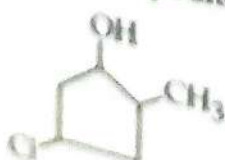
a) 4 - bromo - 2 - ethyl - 2, 5 - dimethylheptane

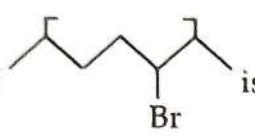
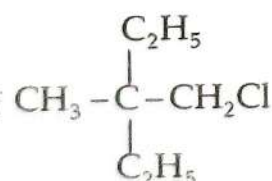
b) 4 - bromo - 3, 6, 6 - trimethyl octane

c) 3 - bromo - 2, 5 - diethyl - 5 - methylhexane

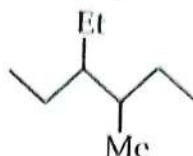
d) 5 - bromo - 3, 3, 6 - trimethyl octane

29. What is the IUPAC name of following compound?



- a) 4-chloro-2-hydroxy-1-methylcyclopentane
 b) 3-chloro-5-methylcyclopentane
 c) 1-chloro-3-methylcyclopentanol
 d) 4-chloro-2-methylcyclopentanol
30. IUPAC name of $\text{H}_2\text{N}-\text{CH}_2-\text{CH}=\text{CH}_2$ is
 a) prop-1-en-3-amine
 b) 3-Aminopropene
 c) 1-propanamine
 d) prop-2-en-1-amine
31. What is the common name of the compound 1-chloro-2,2-dimethylpropane?
 a) Isopentyl chloride
 b) Neopentyl chloride
 c) Tert-butyl chloride
 d) Isobutyl chloride
32. IUPAC name of  is
 a) 4-bromo-3,7-dimethylnonane
 b) 4-bromo-7-ethyl-3-methyldecane
 c) 3-bromo-2,6-diethylheptane
 d) 6-bromo-3,7-dimethylnonane
33. Identify the number of carbon atoms and number of oxygen atoms respectively present in furan molecule
 a) 4, 2
 b) 6, 1
 c) 4, 1
 d) 5, 1
34. Identify IUPAC name of the following compound.
 $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}-\text{CH}_2\text{Cl}$
 a) 1-chloropent-2,4-diene
 b) 5-chloropent-2,4-diene
 c) 5-chloropent-1,3-diene
 d) 1-chloropenta-2,4-diene
35. What is the molecular formula of pyran?
 a) $\text{C}_5\text{H}_6\text{O}$
 b) $\text{C}_4\text{H}_4\text{O}_2$
 c) $\text{C}_5\text{H}_5\text{O}_2$
 d) $\text{C}_6\text{H}_5\text{O}$
36. The IUPAC name of 
 a) 1-chloro-2,2-diethylpentane
 b) 1-chloro-2-ethyl-2-methylbutane
 c) 3-chloro-2,2-diethylpropane
 d) 1-chloro-2-methylpentane
37. How many tertiary carbon atoms and primary carbon atoms respectively are present in 2-iodo-3,3-dimethylpentane?
 a) 0, 4
 b) 2, 3
 c) 1, 3
 d) 2, 4

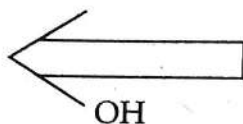
38. What is the molar mass of compound represented below?



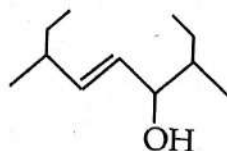
- a) 108 g mol^{-1} b) 120 g mol^{-1} c) 128 g mol^{-1} d) 126 g mol^{-1}
39. Which of the following statements is true for furan?
- a) It contains N atom in a ring b) It is a saturated molecule
c) Molecular formula of Furan is $\text{C}_4\text{H}_4\text{O}$ d) It is a homocyclic compound
40. The common name of 1-bromo-3,3-dimethylbutane is
- a) n-hexyl bromide b) Neohexyl bromide
c) isobutyl bromide d) Tert pentyl bromide

[MHT-CET 2021]

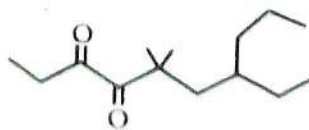
41. What is the IUPAC name of following compound?



- a) 3-methylpentan-1-ol b) 1-methylcyclopentanol-3-ol
c) 3-Hydroxy-1-methylcyclopentane d) 3-methylcyclopentanol
42. Which among the following functional groups has highest priority in deciding principal functional group?
- a) $-\text{CHO}$ b) $-\text{CONH}_2$ c) $-\text{NH}_2$ d) $-\text{COCl}$
43. What is the IUPAC name of following compound?

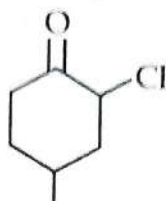


- a) 2-Ethyl-6-methyloct-3-en-5-ol
b) 3,7-Dimethylnon-5-en-4-ol
c) 7-ethyl-3-methyloct-5-en-4-ol
d) 2,6-dimethylhept-4-en-3-ol
44. IUPAC name of following compound is

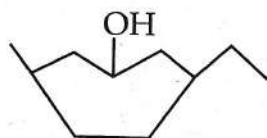


- a) 4-Ethyl-5,5-dimethyldecane-7,8-dione
b) 7-Ethyl-5,5-dimethyldecane-3,4-dione
c) 5,5-dimethyl-3-propylnonane-6,7-ione
d) 5,5-dimethyl-7-propylnonane-3,4-dione

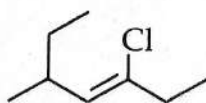
45. What is the IUPAC name of the following compound?



- a) 1 - chloro - 4 - methyl cyclohexan - 2 - one
b) 2 - chloro - 3 - methyl cyclohexanone
c) 2 - chloro - 4 - methyl cyclohexanone
d) 4 - methyl - 2 - chloro cyclohexanone
46. What is the IUPAC name of the following compound?

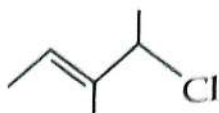


- a) 3 - methyl - 6 - ethyl cyclopentanol
b) 3 - Ethyl - 6 - methyl cyclopentanol
c) 3 - Ethyl cyclopentanol
d) 1 - Ethyl - 5 - methyl cyclopentan - 3 - ol
47. What is difference between molar mass of a member of homologous series from its neighbour member in gram per mole?
- a) 14 b) 18 c) 30 d) 25
48. What is the IUPAC name of the following compound?



- a) 5 - chloro - 3 - methylhept - 4 - ene b) 3 - chloro - 5 - methylhept - 3 - ene
c) 5 - chloro - 5 - ethylhex - 3 - ene d) 4 - chloro - 2 - ethylhex - 3 - ene
49. Which among the following statements is NOT true about homologous series of organic compounds?
- a) Each member of a series differs by two carbon atoms and two hydrogen atoms from neighbouring member.
b) All members have similar chemical properties
c) All members of series have same type of carbon skeleton.
d) All member of series are represented by same general formula.

50. The IUPAC name of following compound is

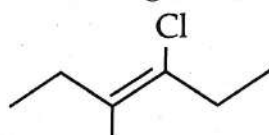


- a) 2-chloro-3-methylpent-3-ene
- b) 4-chloro-3-methylpent-2-ene
- c) 1-chloro-1,2-dimethylbut-2-ene
- d) 4-chloro-3,4-dimethylbut-2-ene

51. IUPAC name of the compound $(\text{CH}_3)_4\text{C}$ is

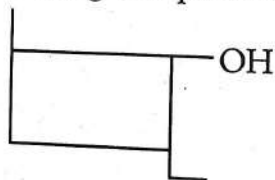
- a) 2-methylbutane
- b) Neobutane
- c) 2,2-dimethylpropane
- d) 2-methylpentane

52. What is the IUPAC name of the following compound?



- a) 4-chloro-4-ethyl-3-methylbut-3-ene
- b) 4-chloro-3-methylhex-3-ene
- c) 3-chloro-4-ethylbut-3-ene
- d) 3-chloro-4-methylhex-3-ene

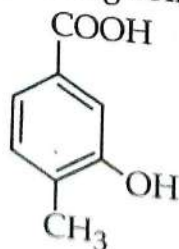
53. What is the IUPAC name of following compound?



- a) 2-Ethyl-1-hydroxy-4-methylcyclobutane
- b) 1-Ethyl-2-hydroxy-3-methylcyclobutane
- c) 4-Ethyl-2-methylcyclobutanol
- d) 2-Ethyl-4-methylcyclobutanol

[MHT-CET 2022]

54. What is the IUPAC name of the following compound?



- a) 5-methyl-3-Hydroxybenzoic acid
- b) 3-Hydroxy-4-methylbenzoic acid
- c) 4-methyl-3-Hydroxybenzoic acid
- d) 5-Hydroxy-4-methylbenzoic acid