

Example



These are of two types –

## 2.2.1 Homocyclic compounds : –

These are the compounds in which the complete ring is formed by carbon atoms only. These are also of two types –

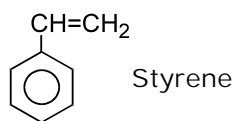
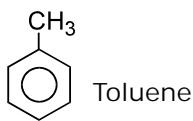
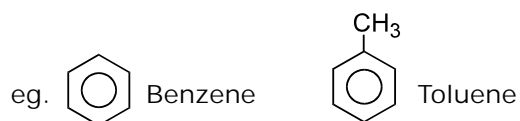


## (a) Alicyclic compounds : –

These are the compounds having the properties like aliphatic compounds. These may be saturated or unsaturated like aliphatic compounds.

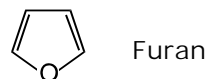
## (b) Aromatic compounds : –

These compounds consist of at least one benzene ring i.e. a six-membered carbocyclic ring having alternate single and double bonds. These compounds have some fragrant odour and hence, named as aromatic (greek word aroma means sweet smell)



## 2.2.2 Heterocyclic Compounds : –

These are cyclic compounds having ring or rings built up of more than one kind of atoms.



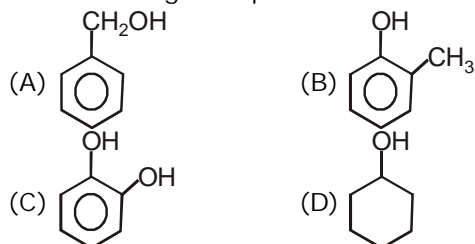
## 3. I.U.P.A.C SYSTEM OR GENEVA SYSTEM

(International Union of Pure & Applied Chemistry)

This system is based on the total number of carbons in the selected carbon chain in any organic compound. Following word root are used in this system.

1C	2C	3C	4C	5C	6C	7C
Meth	Eth	Prop	But	Pent	Hex	Hept
8C	9C	10C	11C	12C	13C	14C
Oct	Non	Dec.	Undec	Dodec	Tridec	Tetradec
19C	20C	21C				
Nonedec	Eicosane	Uneicosane				
22C	23C	30C				

Q.19 The homologue of phenol is -



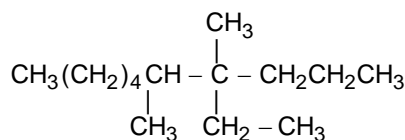
Q.20 What is not true about homologous series ?

- (A) All the members have similar chemical properties  
 (B) They have identical physical properties  
 (C) They can be represented by a general formula  
 (D) Adjacent members differ in molecular mass by 14


Q.21 Which one of the following I.U.P.A.C. name is correct ?

- (A) 2-Methyl-3-ethyl pentane  
 (B) 2-Ethyl-3-methyl pentane  
 (C) 3-Ethyl-2-methyl pentane  
 (D) 3-Methyl-2-ethyl pentane

Q.22 What is the correct IUPAC name for the following compound ?

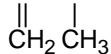


- (A) 3,4 - Dimethyl -3-n - propyl nonane  
 (B) 6, 7 - Dimethyl -2- n- propyl nonane  
 (C) 6,7- Dimethyl -7- ethyl decane  
 (D) 4- Ethyl- 4, 5 - dimethyl decane

Q.23 The IUPAC name of  is -

- (A) 4-ethyl -3- methyl hexane  
 (B) 3-ethyl -4- methyl hexane  
 (C) 3-methyl -4- ethyl hexane  
 (D) None of these

Q.24 The I.U.P.A.C name of the compound having structure  $\text{C}_2\text{H}_5 - \text{C} = \text{CH} - \text{CH}_3$  is



- (A) 3-methyl-2-ethyl butene-1  
 (B) 2-ethyl-3-methyl butene-1  
 (C) 3-ethyl-3-methyl butene-1  
 (D) ethyl isopropyl ethene

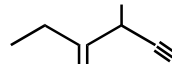
Q.25 The IUPAC name of  $\text{CH}_2 = \text{CH} - \text{C} \equiv \text{CH}$  is -  
 (A) 1-Butenyne-3 (B) 1-Butynene-3  
 (C) Vinyl acetylene (D) all of them

Q.26 The correct IUPAC name of 2-ethyl-3-pentyne is :

- (A) 3-methyl hexyne-4  
 (B) 4-ethyl pentyne-2  
 (C) 4-methyl hexyne-2  
 (D) None of these

Q.27 The I.U.P.A.C. name of following structure  $(\text{CH}_3) \text{C.C.C.} (\text{CH}_3) \text{CH} (\text{CH}_3)$  is -

- (A) 3-methyl-4-hexynene-2  
 (B) 3-methyl-2-hexenyne-4  
 (C) 4-methyl-4-hexenyne-4  
 (D) all are correct

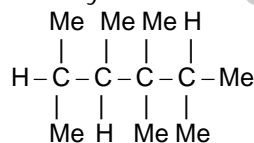
Q.28 The IUPAC name of  is -

- (A) 2-ethyl-3-methyl-1-penten-4-yne  
 (B) 2-ethyl-3-methyl-4-pentyn-1-ene  
 (C) 4-ethyl-3-methyl-1-pentyn-4-ene  
 (D) 4-ethyl-3-ethyl-4-penten-1-yne

Q.29 The molecular formula of the first member of the family of alkenynes and its name is given by the set:

- (A)  $\text{C}_3\text{H}_2$  allene  
 (B)  $\text{C}_5\text{H}_6$ , 1-penten-3-yne  
 (C)  $\text{C}_6\text{H}_8$ , 1-hexen-5-yne  
 (D)  $\text{C}_4\text{H}_4$ , butenyne

Q.30 Number of  $3^\circ$  carbon and  $1^\circ$  hydrogen respectively in the following structure are :



- (A) 3, 21 (B) 3, 23 (C) 2, 18 (D) 3, 18

## ANSWER KEY

- |       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1. B  | 2. D  | 3. C  | 4. B  | 5. D  |
| 6. D  | 7. D  | 8. D  | 9. D  | 10. C |
| 11. C | 12. D | 13. A | 14. B | 15. C |
| 16. B | 17. D | 18. D | 19. B | 20. B |
| 21. C | 22. D | 23. B | 24. B | 25. A |
| 26. C | 27. B | 28. A | 29. D | 30. A |