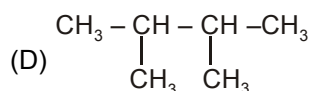
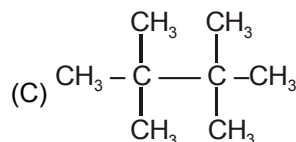
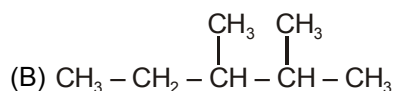
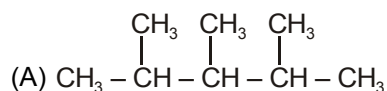


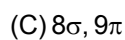
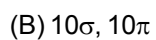
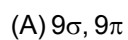
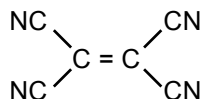
IUPAC AND NOMENCLATURE

EXERCISE - I

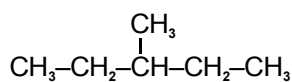
1. Write the open all valencies of the following compound $\text{CH}(\text{CH}_3)_2 \text{CH}(\text{CH}_3) \text{CH}_2 (\text{CH}_3)_2$



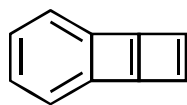
2. The no. of σ and π bonds in the given compound is :



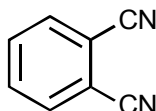
3. How many 2° hydrogens are there in the given compound



4. What is the DBE of the given compounds.



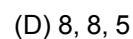
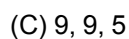
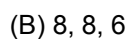
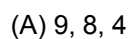
(i)



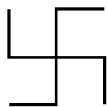
(ii)



(iii)

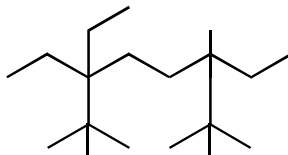


5. What is the IUPAC nomenclature of the given compound ?



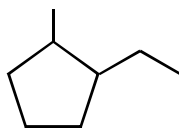
(A) 3,3-dimethylbutane (B) 3,3-diethylbutane (C) 3,3-dimethylpentane (D) 3,3-diethylpentane

6. What is the IUPAC nomenclature of the given compound ?



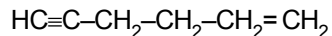
(A) 6-methyl-3-ethyl-3,6-bis-(t-butyl) octane (B) 3-ethyl-6-methyl-3,6-bis-(t-butyl)
(C) 3,3,6-triethyl-2,2,6,7-pentamethyl octane (D) 3,3,6-triethyl-2,2,6,7,7-pentamethyl octane

7. Write the IUPAC nomenclature of the given compound.



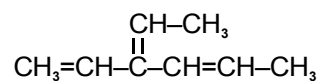
(A) 1-ethyl-2-methylcyclopentane (B) 2-ethyl-1-methyl acyclopentane
(C) 1-methyl-2-ethylcyclopentane (D) 2-methyl-1-ethyl cyclopentane

8. Write the IUPAC nomenclature of the following compound.



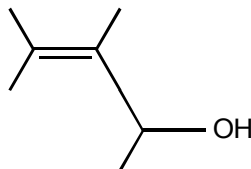
(A) Hex-1-yne-5-ene (B) Hex-1-en-5-yne (C) Hex-5-en-1-yne (D) Hex-1-yn-5-ene

9. Write the IUPAC nomenclature of the following compound.



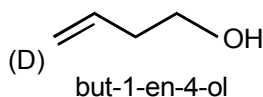
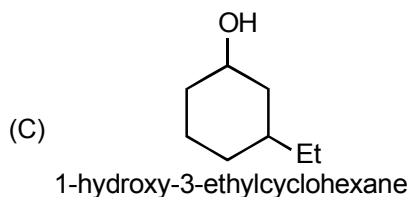
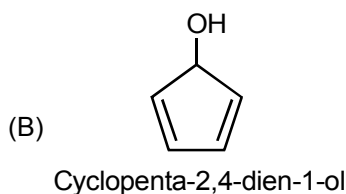
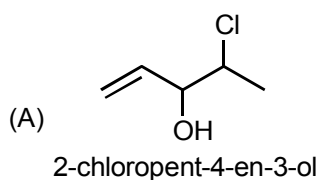
(A) 3-ethylidenehexa-1,4-diene (B) 4-ethenylhexa-2,4-diene
(C) 3-ethenylhexa-2,4-diene (D) 3-propenylpenta-1,3-diene

10. Write the IUPAC nomenclature of the following compound.

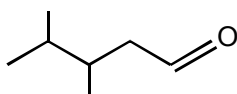


(A) 3,4-dimethylpent-3-en-2-ol (B) 2,3-dimethylpent-2-en-4-ol
(C) 2,3-dimethylpent-3-en-3-ol (D) 2,3-dimethylpent-3-en-4-ol

11. Which of the following is the correct IUPAC nomenclature



12. Which is the correct IUPAC nomenclature of the following-



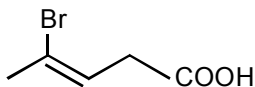
(A) 3,4-dimethylpentanal

(B) 2,3-dimethylpentan-5-al

(C) 2,-3-dimethylbutanal

(D) 3,4-dimethylbutanal

13. Write the correct IUPAC nomenclature of the following compound



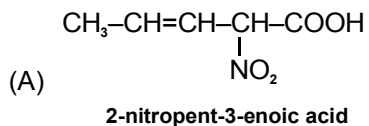
(A) 2-Bromopent-2-enoic acid

(B) 4-Bromobut-3-enoic acid

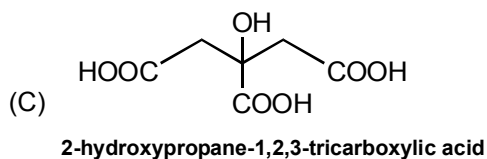
(C) 4-Bromopent-3-enoic acid

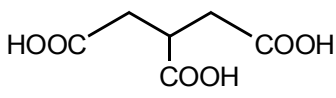
(D) 2-Bromobut-2-enoic acid

14. Which of the following is the incorrect IUPAC

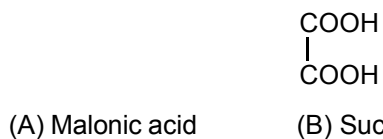


(B) HOOC-CH=CH-COOH
Butan-2-ene-1,4-dioic acid



(D) 
3-carboxypentan-1,5 dioic acid

15. What is the common name of the fowing compound

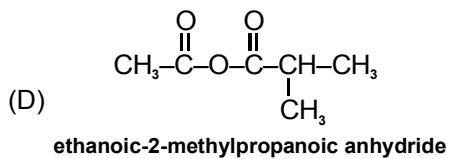
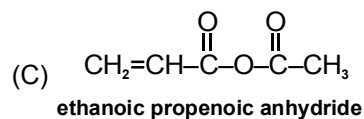
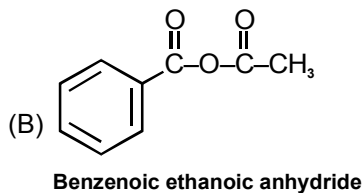
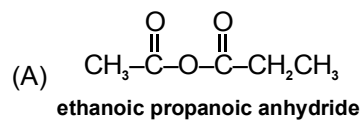


(B) Succinic acid

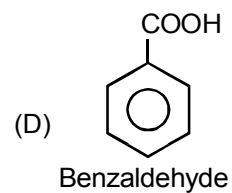
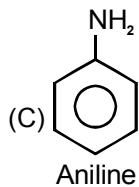
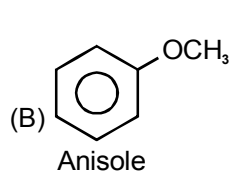
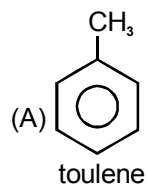
(C) Oxalic acid

(D) Subric acid

16. Which of the following is incorrect IUPAC nomenclature of the following compound

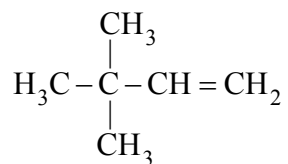


17. Which of the following is the incorrect common name of the following compound,



EXERCISE - II

1. The IUPAC name of the compound having the formula is:



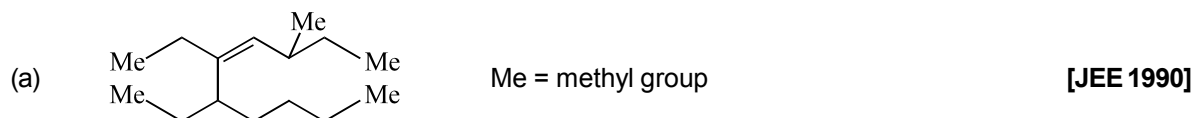
- (A) 3,3,3-Trimethylprop-1-ene (B) 1,1,1-Trimethylprop-2-ene
(C) 3,3-Dimethylbut-1-ene (D) 2,2-Dimethylbut-3-ene [JEE 1984]

2. Write the IUPAC name of $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}\cdot\text{COOH}$ [JEE 1986]

3. The IUPAC name of the compound $\text{CH}_2=\text{CH}-\text{CH}(\text{CH}_3)_2$ is:
(A) 1,1-Dimethylprop-2-ene (B) 3-Methylbut-1-ene
(C) 2-Vinyl propane (D) None of the above [JEE 1987]

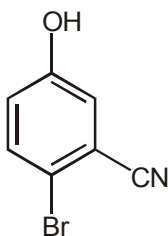
4. The number of sigma and pi-bonds in 1-butene 3-yne are: [JEE 1989]
(A) 5 sigma and 5 pi (B) 7 sigma and 3 pi (C) 8 sigma and 2 pi (D) 6 sigma and 4 pi

5. Write I.U.P.A.C name of following:



6. Write IUPAC name of succinic acid. [JEE 1994]

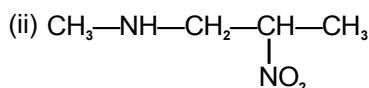
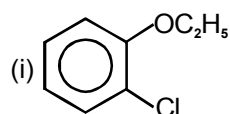
7. The IUPAC name of the following compound is



- (A) 4-Bromo-3-cyanophenol (B) 2-Bromo-5-hydroxybenzonitrile
(C) 2-Cyano-4-hydroxybromobenzene (D) 6-Bromo-3-hydroxybenzonitrile [JEE 2009]

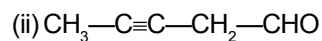
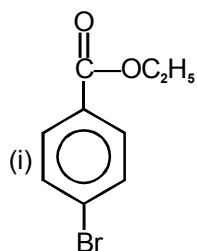
CBSE Previous Year Questions

8. Write IUPAC names of the following : [2; CBSE-2003]



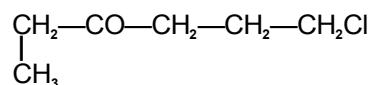
9. Write IUPAC names of the following :

[2; CBSE-2003]



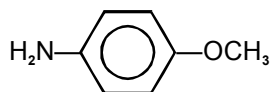
10. Write the IUPAC name of the following compound :

[1; CBSE-2004]



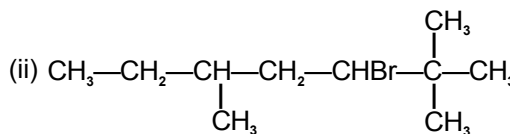
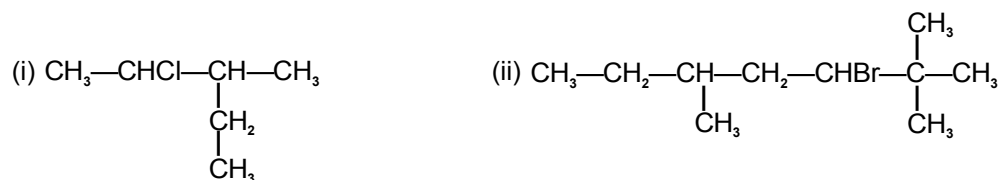
11. Write the IUPAC name of the following :

[1; CBSE-2004]



12. Write the IUPAC names of the following compounds :

[2; CBSE-2005]

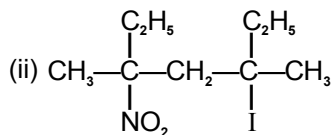


13. Write the IUPAC names of $\text{CH}_3\text{COCH}_2\text{COCH}_3$

[1; CBSE-2006]

14. Write the IUPAC names of the following compound :

[2; CBSE-2006]

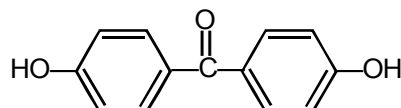


15. Draw the structural formula of hex-2-en-4-ynoic acid

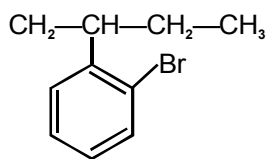
[1; CBSE-2006]

16. Write the IUPAC name of the following :

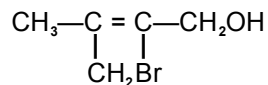
[1; CBSE-2008]



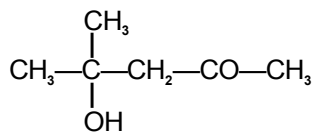
17. Write the IUPAC name of : [1; CBSE-2008]



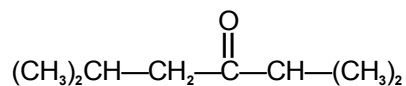
18. Give the IUPAC name of the following compound : [1; CBSE-2009]



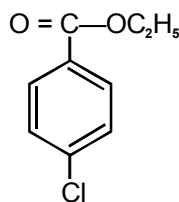
19. Write the IUPAC name of the following : [1; CBSE-2001]



20. Write the IUPAC name of the following : [1; CBSE-2009]

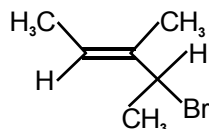


21. Write the IUPAC name of the following compound : [1; CBSE-2009]



22. Give the IUPAC name of $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{CH}=\text{CH}_2$ [1; CBSE-2010]

23. Give the IUPAC name of the following compound : [1; CBSE-2010]

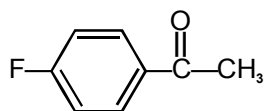


24. Write the structure of the molecule of compound whose IUPAC name 1-phenylpropan-2-ol.

[1; CBSE-2010]

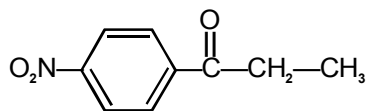
25. Write the IUPAC name of the compound :

[1; CBSE-2010]



26. Write the IUPAC name of the compound

[1; CBSE-2010]

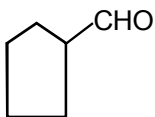


27. Write the structure of the compound 4-tert-Butyl-3-iodoheptane.

[1; CBSE-2010]

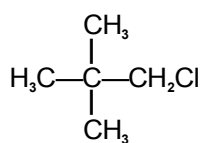
28. Write the IUPAC name of the following compound :

[1; CBSE-2010]



29. Write the IUPAC name of the following compound :

[1; CBSE-2010]



30. Write the structure of the compound 1-chloro-4-ethylcyclohexane.

[1; CBSE-2010]

ANSWER KEY

EXERCISE - I

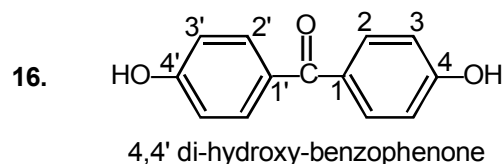
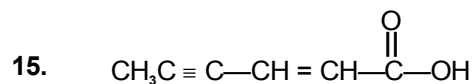
- | | | | | | | | | | | | | | |
|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|
| 1. | A | 2. | A | 3. | B | 4. | D | 5. | D | 6. | D | 7. | A |
| 8. | B | 9. | A | 10. | A | 11. | B | 12. | A | 13. | C | 14. | D |
| 15. | C | 16. | C | 17. | D | | | | | | | | |

EXERCISE - II

- | | | | | | | | | | | |
|----|-----------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|------------------|
| 1. | C | 2. | $\begin{array}{cccccc} \text{CH}_3 & - & \text{CH}_2 & - & \text{CH} & = & \text{CH} & - & \text{COOH} \\ & & 5 & & 4 & & 3 & & 2 & & 1 \end{array}$ | | | | | | | |
| | | | | | | | | | | 2-Pentenoic acid |
| 3. | B | 4. | B | | | | | | | |
| 5. | (a) | 5,6-Diethyl-3-methyl-dec-4-ene | | | | | | | | |
| | (b) | N,N, 3-Trimethyl-3-pentanamine | | | | | | | | |
| 6. | Butane-1,4-dioic acid | 7. | B | | | | | | | |

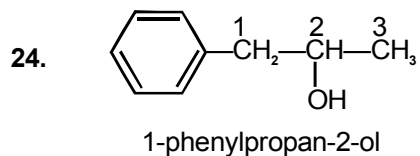
CBSE Previous Year Questions

8. (i) 2-chloro-1-ethoxy benzene (ii) (N-Methyl) 2-nitro propanamine
9. (i) Ethyl-4-bromo benzoate (ii) Pent-3-yn-1-al
10. 6-chlorohexane-3-one
11. 4-Methoxy benzenamine
12. (i) 2-chloro-3-methylpentane (ii) 3-Bromo-2,2, 5-trimethylheptane
13. 2, 4-Pentanedione
14. (i) 3-Chloro-5-fluoro-3, 5-dimethyl heptane (ii) 3-Iodo-5-nitro-3, 5-dimethyl heptane

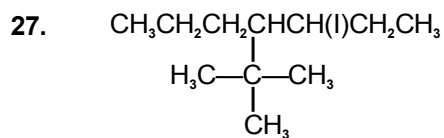


17. 1-Bromo-2 sec. butyl-benzene.
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18. 2-Bromo-3-Methyl-but-2-en-1-ol
19. 4-Hydroxy-4-methyl pentan-2-one
20. 2, 5-dimethyl-hexan-3-one
21. Ethyl-4-chloro-1-benzoate
22. But-3-en-1-amine
23. 4-Bromo-3-methylpent-2-ene



25. 4-Fluoroacetophenone.
26. 4-Nitro-phenylpropan-1-one.



28. Cyclopentane carbaldehyde
29. 1-Chloro-2,2-dimethyl propane.

