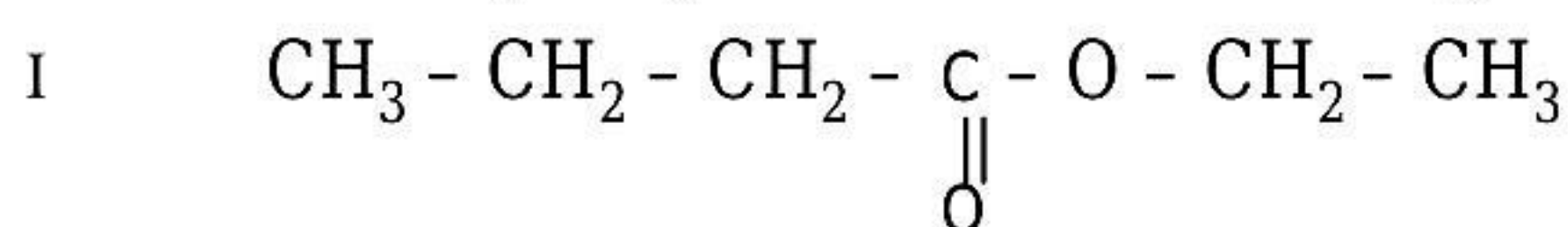


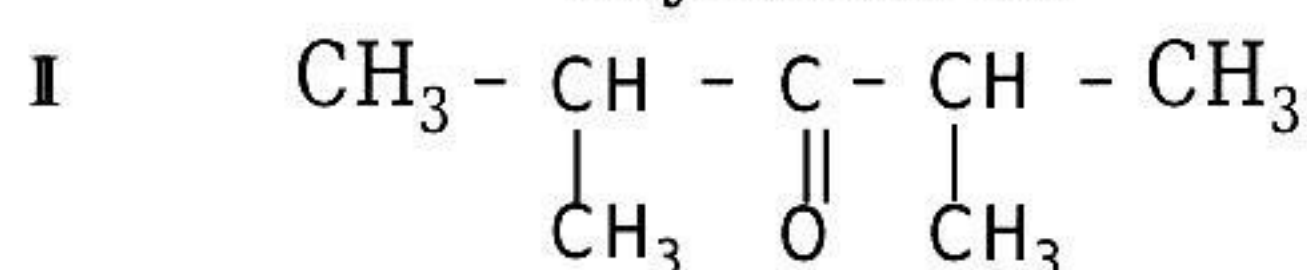
1 NOMENCLATURE OF ORGANIC COMPOUND

I I E E - M A I N / A I E E E]

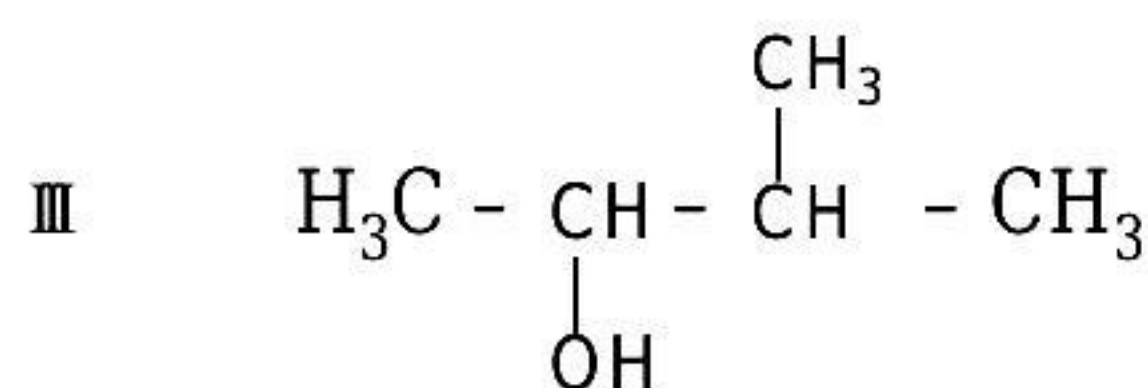
1. Of the following compounds which has a wrong IUPAC name - [AIEEE-2002]



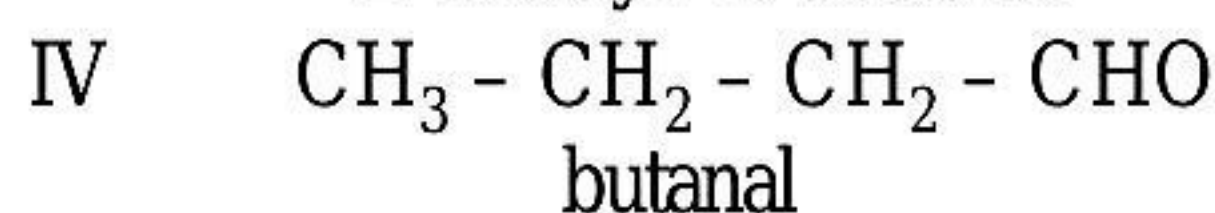
ethyl butanoate



2,4-dimethyl-3-pentanone



2-methyl-3-butanol



(A) I

(B) II

(C) III

(D) IV

2. The IUPAC name of $\text{CH}_3\text{COCH}(\text{CH}_3)_2$ is - [AIEEE-2003]

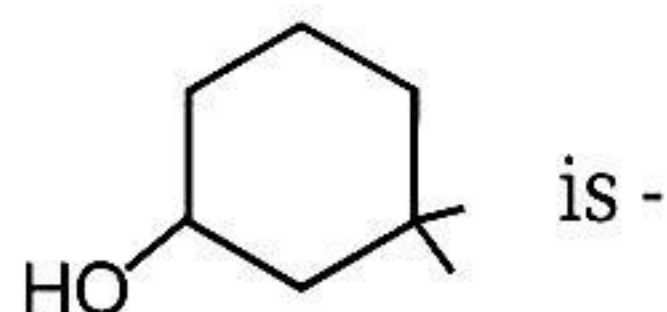
(A) 4-methylisopropyl ketone

(B) 3-methyl-2-butanone

(C) Isopropylmethyl ketone

(D) 2-methyl-3-butanone

3. The IUPAC name of the compound [AIEEE-2004]



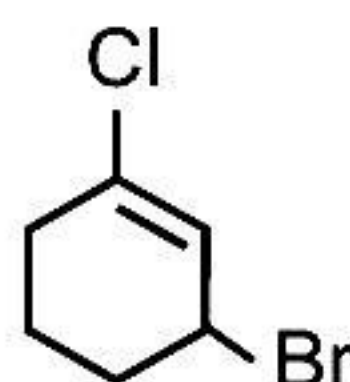
(A) 3,3-dimethyl-1-hydroxy cyclohexane

(B) 1,1-dimethyl-3-hydroxy cyclohexane

(C) 3,3-dimethyl-1-cyclohexanol

(D) 1,1-dimethyl-3-cyclohexanol

4. The IUPAC name of the compound shown below is - [AIEEE-2006]



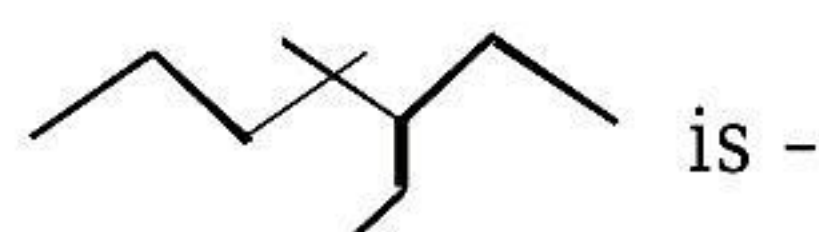
(A) 6-bromo-2-chlorocyclohexene

(B) 3-bromo-1-chlorocyclohexene

(C) 1-bromo-3-chlorocyclohexene

(D) 2-bromo-6-chlorocyclohex-1-ene

5. The IUPAC name of [AIEEE-2007]



(A) 1,1-diethyl-2-dimethylpentane

(B) 4,4-dimethyl-5,5-diethylpentane

(C) 5,5-diethyl-4,4-dimethylpentane

(D) 3-ethyl-4,4-dimethylheptane

6. The correct decreasing order of priority for the functional groups of organic compounds in the IUPAC system of nomenclature is [AIEEE 2008]

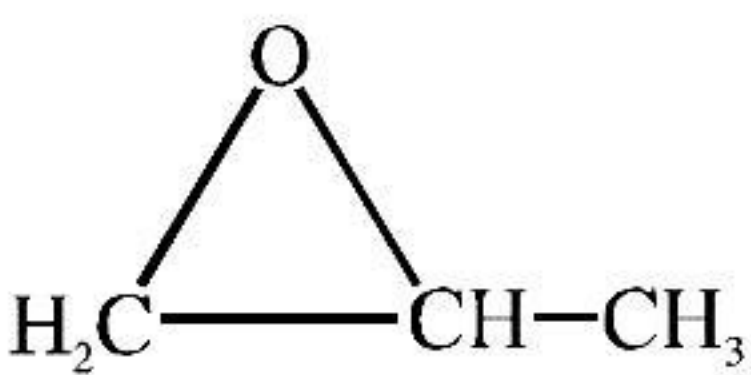
(A) $-\text{SO}_3\text{H}$, $-\text{COOH}$, $-\text{CONH}_2$, $-\text{CHO}$

(B) $-\text{CHO}$, $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{CONH}_2$

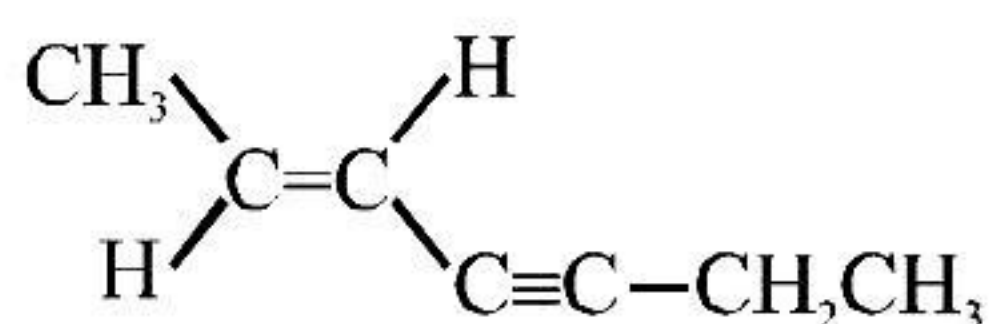
(C) $-\text{CONH}_2$, $-\text{CHO}$, $-\text{SO}_3\text{H}$, $-\text{COOH}$

(D) $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{CONH}_2$, $-\text{CHO}$

7. The IUPAC name of neopentane is : [AIEEE -2009]
 (A) 2-methylpropane (B) 2, 2-dimethylbutane
 (C) 2-methylbutane (D) 2, 2-dimethylpropane

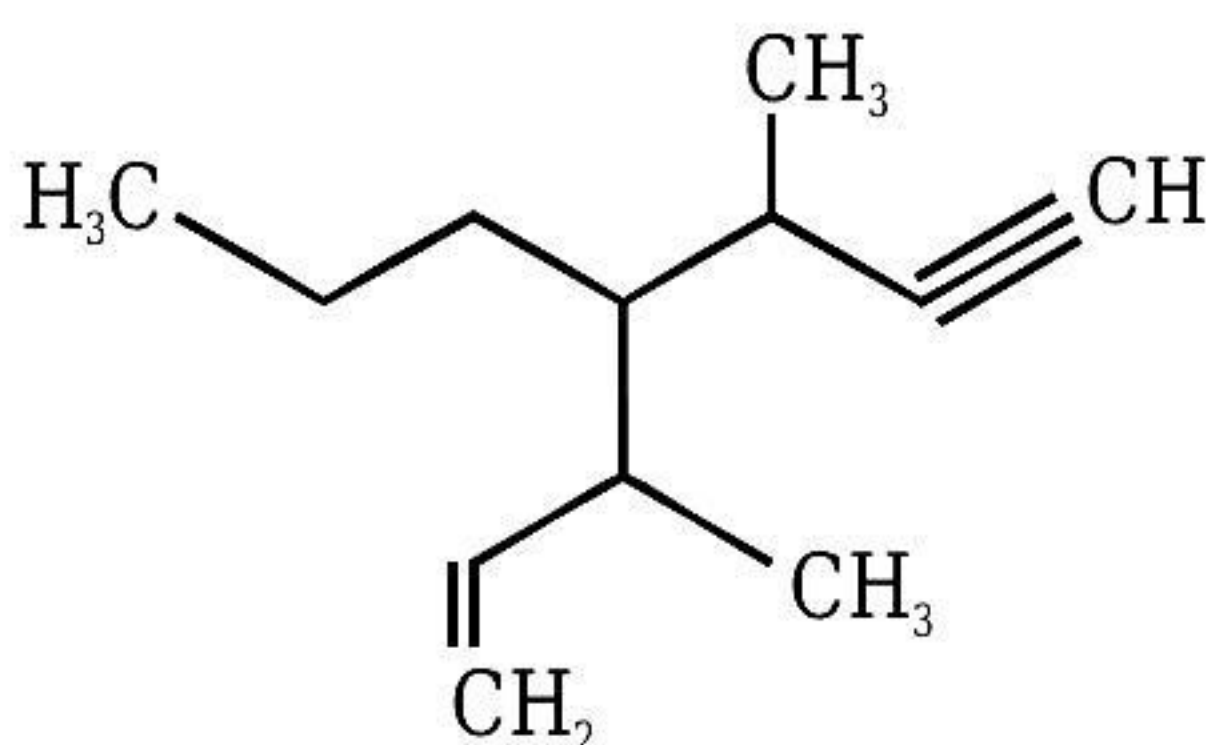
8. The IUPAC name of compound  is :- [AIEEE -2012 (Online)]
 (A) 1, 2-Epoxy propane (B) Propylene oxide
 (C) 1, 2-Oxo propane (D) 1, 2-Propoxide

9. The IUPAC name of the following compound is : [AIEEE -2012 (Online)]

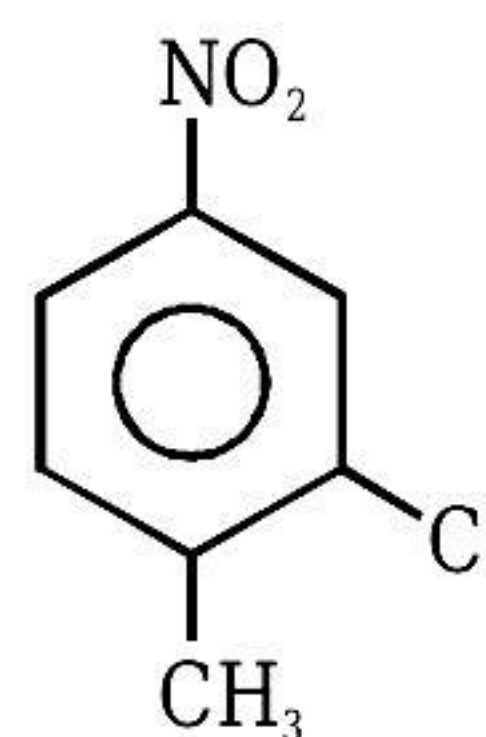


- (A) (Z) - 5- hepten - 3 - yne (B) (Z) - 2- hepten - 4 - yne
 (C) (E) - 5- hepten - 3 - yne (D) (E) - 2- hepten - 4 - yne
10. Aspirin is known as : [AIEEE -2012]
 (A) Acetyl salicylic acid (B) Phenyl salicylate
 (C) Acetyl salicylate (D) Methyl salicylic acid

11. The IUPAC name for the following compound is [JEE Main 2019]

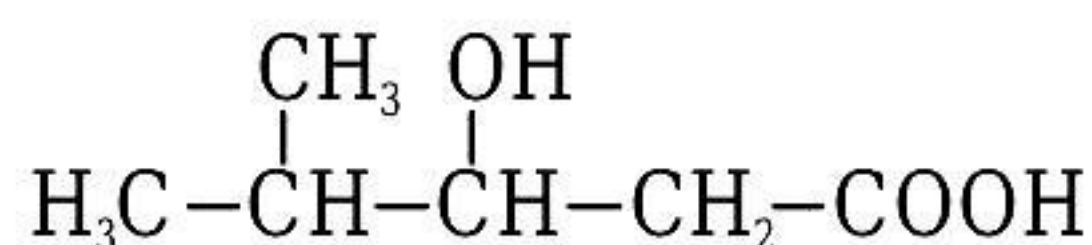


- (A) 3-methyl-4-(3-methylprop-1-enyl)-1-heptyne
 (B) 3, 5-dimethyl-4-propylhept-6-en-1-yne
 (C) 3-methyl-4-(1-methylprop-2-ynyl)-1-heptene
 (D) 3, 5-dimethyl-4-propylhept-1-en-6-yne
12. The correct IUPAC name of the following compound is [JEE Main 2019]

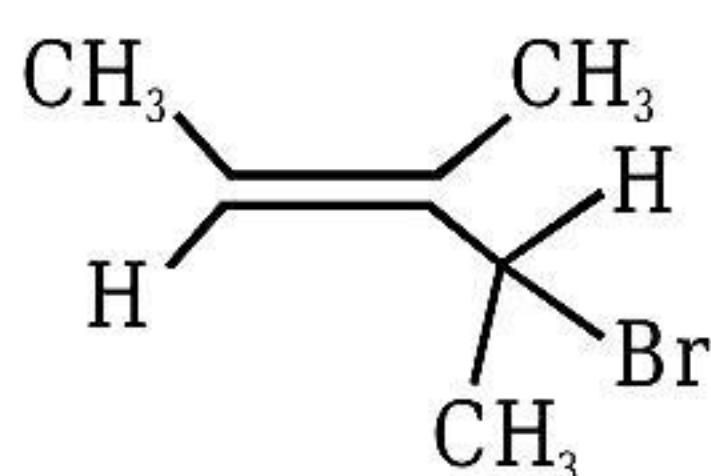


13. Which of the following compounds will show the maximum 'enol' content? **[JEE Main 2019]**
 (A) CH_3COCH_3 (B) $\text{CH}_3\text{COCH}_2\text{COCH}_3$
 (C) $\text{CH}_3\text{COCH}_2\text{COOC}_2\text{H}_5$ (D) $\text{CH}_3\text{COCH}_2\text{CONH}_2$

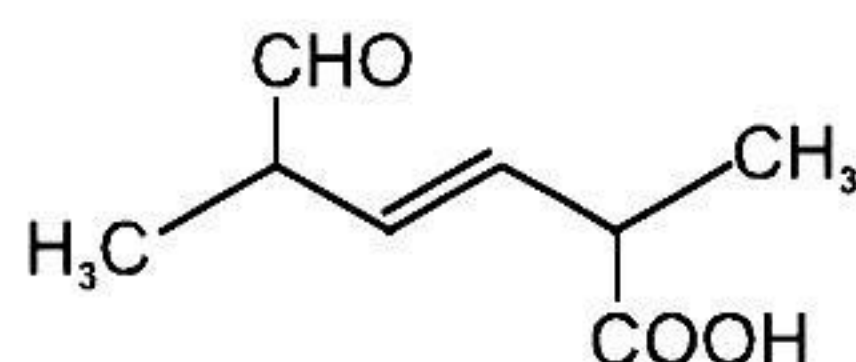
14. The IUPAC name of the following compound is **[JEE Main 2019]**



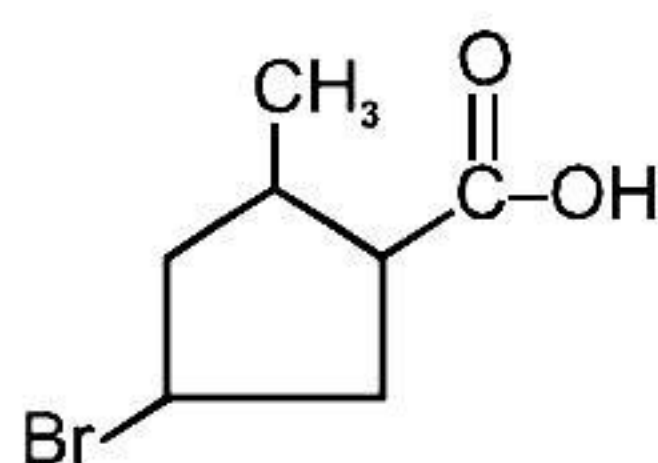
- (A) 4,4-dimethyl-3-hydroxybutanoic acid (B) 2-methyl-3-hydroxypentan-5-oic acid
 (C) 3-hydroxy-4-methylpentanoic acid (D) 4-methyl-3-hydroxypentanoic acid
15. What is the IUPAC name of the following compound? **[JEE Main 2019]**



- (A) 3-bromo-3-methyl-1,2-dimethylprop-1-ene
 (B) 3-bromo-1,2-dimethylbut-1-ene
 (C) 2-bromo-3-methylpent-3-ene
 (D) 4-bromo-methylpent-2-ene
16. The IUPAC name for the following compound is: **[JEE-Main-2020]**



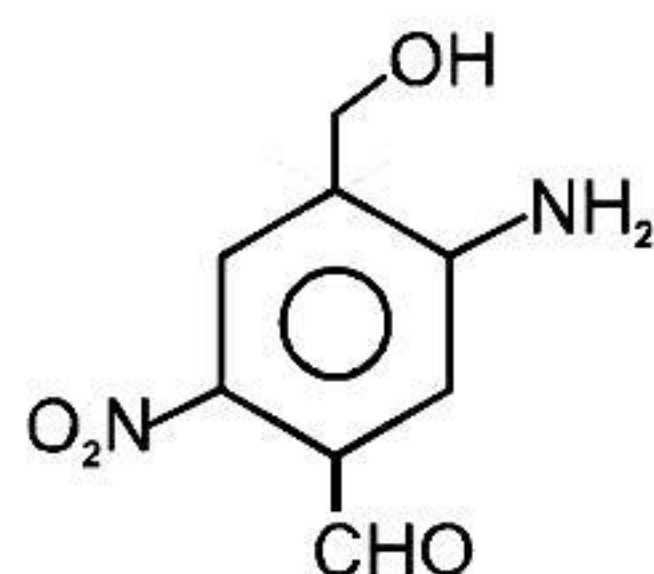
- (A) 2,5-dimethyl-6-carboxy-hex-3-enal (B) 2,5-dimethyl-5-carboxy-hex-3-enal
 (C) 6-formyl-2-methyl-hex-3-enoic (D) 2,5-dimethyl-6-oxo-hex-3-enoic acid
17. The IUPAC name of the following compound is: **[JEE-Main-2020]**



- (A) 3-bromo-5-methylcyclopentane (B) 3-bromo-5-methylcyclopentanoic
 (C) 5-bromo-5-methylcyclopentanoic (D) 4-bromo-2-methylcyclopentanecarboxylic acid

18. The IUPAC name of the following compound is :

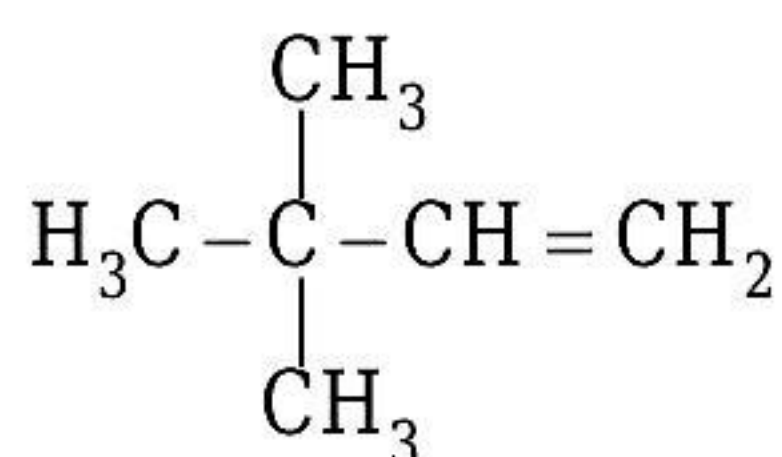
[JEE-Main-2020]



- (A) 2-nitro-4-hydroxymethyl-5-aminobenzaldehyde
(B) 3-amino-4-hydroxymethyl-5-nitrogenzaldehyde
(C) 4-amino-2-formyl-5-hydroxymethylnitrogenzene
(D) 5-amino-4-hydroxymethyl-2-nitrobenzaldehyde

[JEE-ADVANCED]

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



- (A) 3,3,3-trimethyl-1-propene
(B) 1,1,1-trimethyl-2-propene
(C) 3,3-dimethyl-1-butene
(D) 2,2-dimethyl-3-butene

[JEE 1984]

2. Write the IUPAC name of $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCOOH}$

[JEE 1986]

3. The IUPAC name of the compound $\text{CH}_2=\text{CH}-\text{CH}(\text{CH}_3)_2$ is:

- (A) 1,1-dimethyl-2-propene
(B) 3-methyl-1-butene
(C) 2-vinyl propane
(D) None of the above

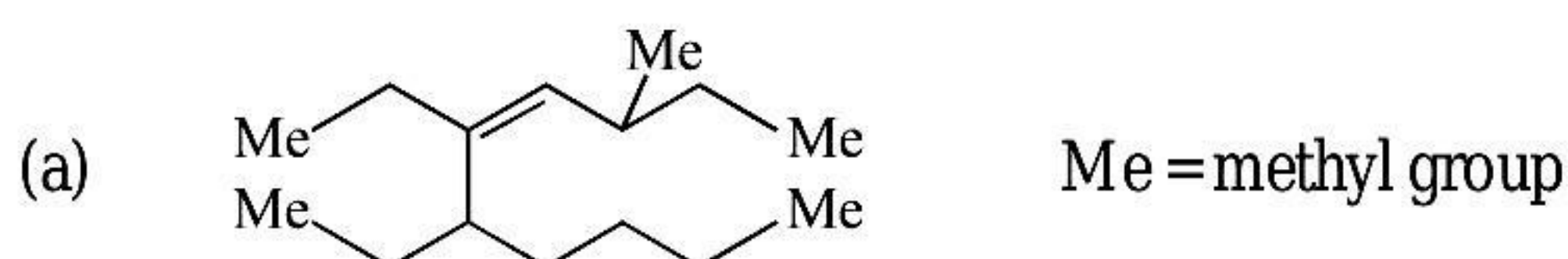
[JEE 1987]

4. The number of sigma and pi-bonds in 1-butene 3-yne are:

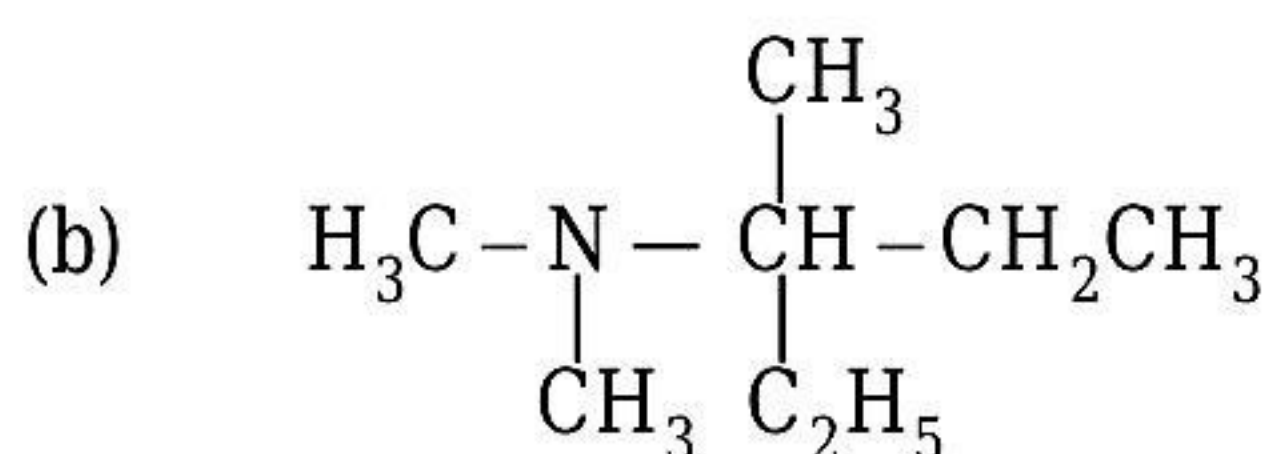
[JEE 1989]

- (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:



[JEE 1990]

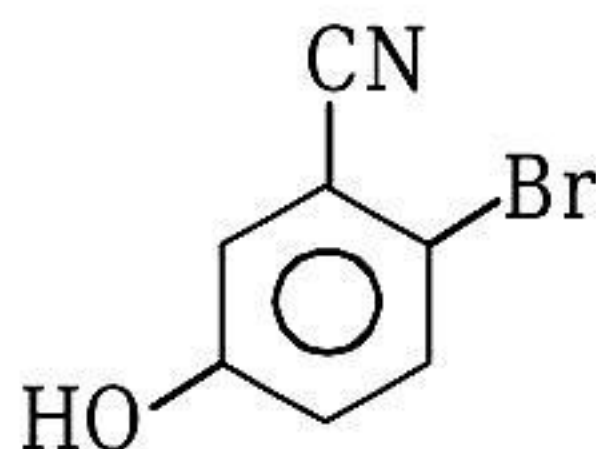


[JEE 1991]

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

7. The IUPAC name of C_6H_5COCl is
(A) Benzoyl chloride (B) Benzene chloro ketone
(C) Benzene carbonyl chloride (D) Chloro phenyl ketone [JEE 2006]

8. The IUPAC name of the following compound is [JEE 2009]



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

9. The correct structure of ethylenediaminetetraacetic acid (EDTA) is [IIT-JEE 2010]

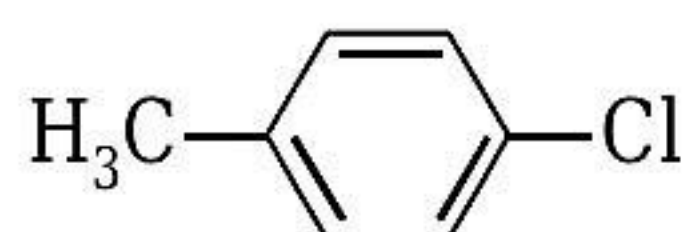
- (A)
$$\begin{array}{c} \text{HOOC}-\text{CH}_2 \quad \quad \quad \text{CH}_2-\text{COOH} \\ \quad \quad \quad \diagdown \quad \diagup \\ \quad \quad \quad \text{N}-\text{CH}=\text{CH}-\text{N} \\ \diagup \quad \diagdown \quad \quad \quad \diagup \quad \diagdown \\ \text{HOOC}-\text{CH}_2 \quad \quad \quad \text{CH}_2-\text{COOH} \end{array}$$
- (B)
$$\begin{array}{c} \text{HOOC} \quad \quad \quad \text{COOH} \\ \diagdown \quad \diagup \\ \text{N}-\text{CH}_2-\text{CH}_2-\text{N} \\ \diagup \quad \diagdown \\ \text{HOOC} \quad \quad \quad \text{COOH} \end{array}$$
- (C)
$$\begin{array}{c} \text{HOOC}-\text{CH}_2 \quad \quad \quad \text{CH}_2-\text{COOH} \\ \quad \quad \quad \diagdown \quad \diagup \\ \quad \quad \quad \text{N}-\text{CH}_2-\text{CH}_2-\text{N} \\ \diagup \quad \diagdown \quad \quad \quad \diagup \quad \diagdown \\ \text{HOOC}-\text{CH}_2 \quad \quad \quad \text{CH}_2-\text{COOH} \end{array}$$
- (D)
$$\begin{array}{c} \quad \quad \quad \text{COOH} \\ \quad \quad \quad \diagdown \\ \quad \quad \quad \text{CH}_2 \\ \diagup \quad \diagdown \quad \quad \quad \diagup \quad \diagdown \\ \text{HOOC}-\text{CH}_2 \quad \text{N}-\text{CH}-\text{CH}-\text{N} \quad \text{H} \\ \diagdown \quad \diagup \quad \quad \quad \diagdown \quad \diagup \\ \text{H} \quad \quad \quad \text{CH}_2 \quad \quad \quad \text{CH}_2-\text{COOH} \\ \quad \quad \quad \diagup \\ \quad \quad \quad \text{HOOC} \end{array}$$

10. The total number of lone-pairs of electrons in melamine is [JEE Advance 2013]

11. The correct combination of names for isomeric alcohols with molecular formula $C_4H_{10}O$ is/are
(A) tert-butanol and 2-methylpropan-2-ol
(B) tert-butanol and 1,1-dimethylethan-1-ol
(C) n-butanol and butan-1-ol
(D) isobutyl alcohol and 2-methylpropan-1-ol [JEE Advance 2014]

12. The IUPAC name(s) of the following compound is(are)

[JEE Advance 2017]



(A) 1-chloro-4-methylbenzene

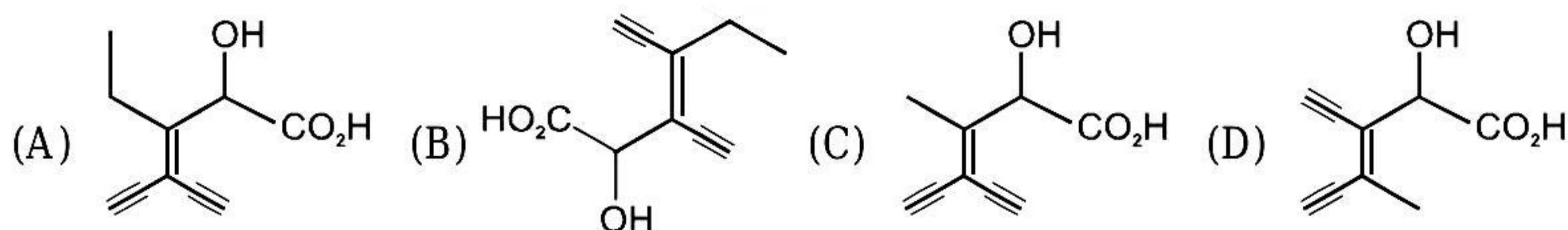
(B) 4-chlorotoluene

(C) 1-methyl-4-chlorobenzene

(D) 4-methylchlorobenzene

13. Which one of the following structures has the IUPAC name 3-ethynyl-2-hydroxy-4-methylhex-3-en-5-ynoic acid ?

[JEE Advance 2020]



ANSWER KEY

[JEE-MAIN/AIEEE]

- | | | | | | | | | | | | | | |
|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|
| 1. | C | 2. | B | 3. | C | 4. | B | 5. | D | 6. | D | 7. | D |
| 8. | A | 9. | D | 10. | A | 11. | D | 12. | C | 13. | B | 14. | C |
| 15. | D | 16. | D | 17. | D | 18. | D | | | | | | |

[JEE-ADVANCED]

1. C
2. $\text{CH}_3 - \text{CH}_2 - \text{CH} = \text{CH} - \text{COOH}$
5 4 3 2 1
- Pent-2-en-1-oic acid or Pent-2-enoic 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. C 8. B 9. C 10. 6
11. ACD 12. AB 13. D