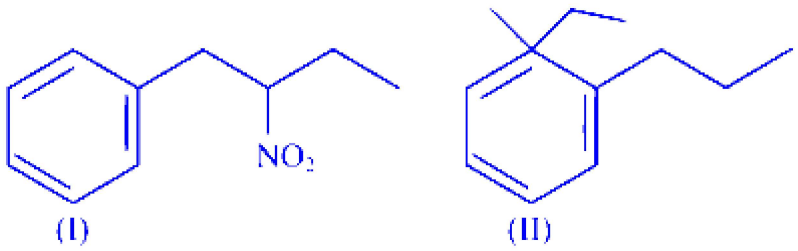
IUPAC Nomenclatures

Question1

IUPAC names of the given compounds (I) and (II) are respectively



AP EAPCET 2025 - 26th May Evening Shift

Options:

A.

5-phenyl-3- nitrobutane, 2-ethyl-2-methyl-1-propylcyclohexane

B.

2-nitro-1-phenylbutane; 2-ethyl-2-methyl-1-propylcyclohexane

C.

2-nitro-1-phenylbutane; 1-ethyl-1-methyl-2-propylcyclohexane

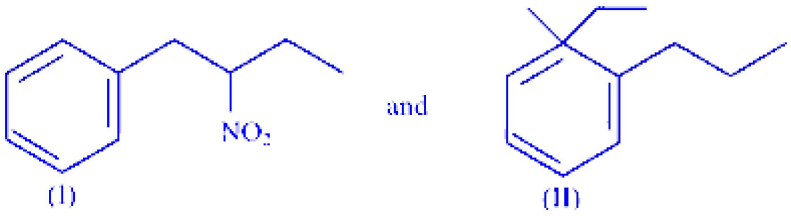
D.

3-nitro-5-phenylbutane; 1-ethyl-1-methyl-2-propylcyclohexane

Answer: C

Solution:

The IUPAC names of



(I) (II)

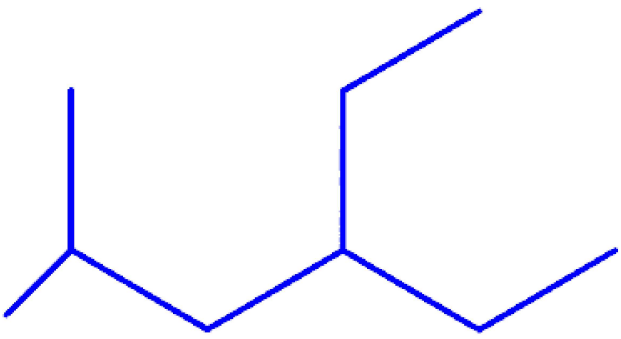
are respectively

2-nitro-1-phenyl-butane

1-ethyl-1-methyl-2-propylcyclohexane

Question2

IUPAC name of the following compound is



AP EAPCET 2025 - 23rd May Evening Shift

Options:

A.

2-methyl-4-ethylhexane

B.

4-ethyl-2-methylhexane

C.

5-methyl-3-ethylhexane

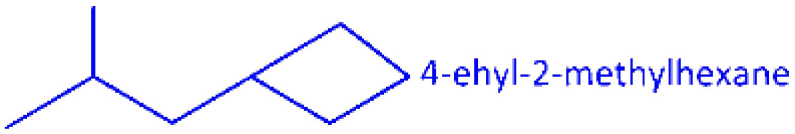
D.

3-ethyl-5-methylhexane

Answer: B

Solution:

The correct IUPAC name of



Question3

IUPAC names of mesityl oxide and oxalic acid are respectively.

AP EAPCET 2025 - 23rd May Morning Shift

Options:

A.

4 - methylpent - 3 - en - 2 one ; Ethanedioic acid.

B.

4 - methylpent - 3 - en - 2 - one ; Propanedioic acid.

C.

3 - methylpent - 3 - en - 2 - one ; Propanedioic acid.

D.

3 - methylpent - 3 - en - 2 - one ; Ethanedioic acid.

Answer: A

Solution:

The correct IUPAC name of mesityl oxide and oxalic acid are

4-methylpent-3-en-2-one and ethanedioic acid.

Question4

The correct decreasing order of priority for the functional group of organic compounds in the IUPAC method of nomenclature is

AP EAPCET 2025 - 22nd May Morning Shift

Options:

A.

$-\mathrm{CHO} > -\mathrm{OH} > -\mathrm{CONH_2} > -\mathrm{COCl}$

B.

$-\mathrm{CONH_2} > -\mathrm{CHO} > -\mathrm{COCl} > -\mathrm{OH}$

C.

$-\mathrm{COCl} > -\mathrm{CONH_2} > -\mathrm{CHO} > -\mathrm{OH}$

D.

$-\mathrm{CHO} > -\mathrm{CONH_2} > -\mathrm{COCl} > -\mathrm{OH}$

Answer: C

Solution:

The correct order of decreasing priority of functional group is,

Acyl chloride > Amide > Aldehyde > Alcohol

$-\mathrm{COCl} > -\mathrm{CONH_2} > -\mathrm{CHO} > -\mathrm{OH}$

Question5

The IUPAC name of the following compound is

AP EAPCET 2025 - 21st May Morning Shift

Options:

A.

6-ethyl-9- methyl-4- bromodec-5- en-7- ol

B.

7-bromo-2-methyl-5-ethyldec-5-en-4-ol

C.

7-bromo-5-ethyl-2-methyldec-5-en-4-ol

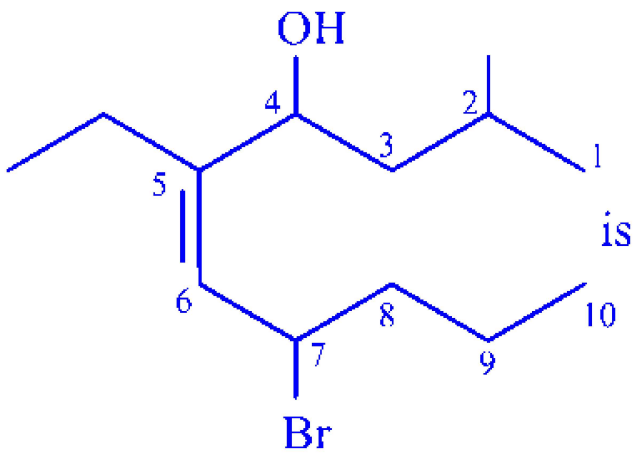
D.

4-bromo-6-ethyl-9-methyldec-5-en-7-ol

Answer: C

Solution:

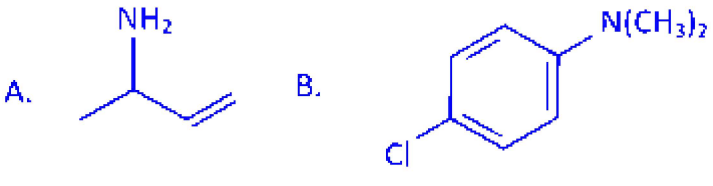
The correct IUPAC name of



7-bromo-5-ethyl-2 methyl dec-5-en-4-ol

Question6

IUPAC names of the following compounds A and B **are**



AP EAPCET 2024 - 21th May Evening Shift

Options:

A. $A =$ but-3-en-2-amine; $B = 4 - N$, N -dimethylaminochlorobenzene

B. $A =$ but-1-en-3-amine; $B = 4 - N$, N -dimethylaminochlorobenzene

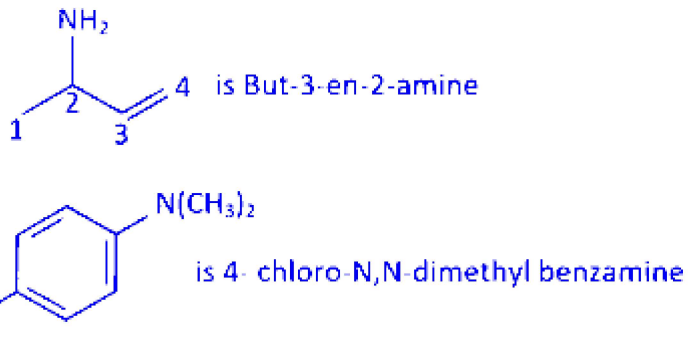
C. A = but-1-en-3-amine; B = 4-chloro- N , N -dimethylbenzenamine

D. A = but-3-en-2-amine; B = 4-chloro- N , N -dimethylbenzenamine

Answer: D

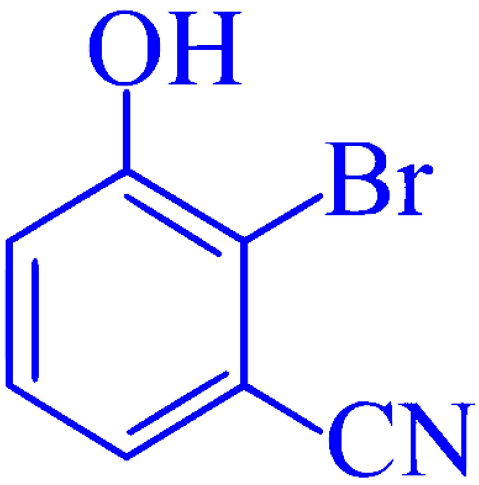
Solution:

The IUPAC name of the given compound i.e.,



Question7

The IUPAC name of the following compound is



AP EAPCET 2022 - 5th July Morning Shift

Options:

A. 1-bromo-2-hydroxybenzonitrile

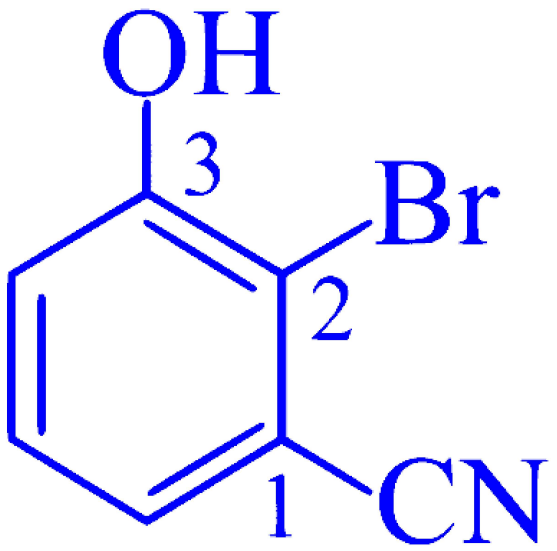
B. 2-bromo-3-cyanophenol

C. 2-bromo-3-hydroxy benzonitrile

D. 3-hydroxy-2-bromobenzonitrile

Answer: C

Solution:



The priority order for the given functionalities in $-CN > -OH > -Br$.

$\therefore$ The numbering will be done from $-CN$ and in such a way that the groups get lowest number possible.

Hence, the IUPAC name will be 2-bromo-3-hydroxy benzonitrile.

Question8

What is the IUPAC name of $CH_3CH\,(CH_2CH_3)CHO$?

AP EAPCET 2021 - 19th August Evening Shift

Options:

A. Butan-2-al

B. 2-methyl butanal

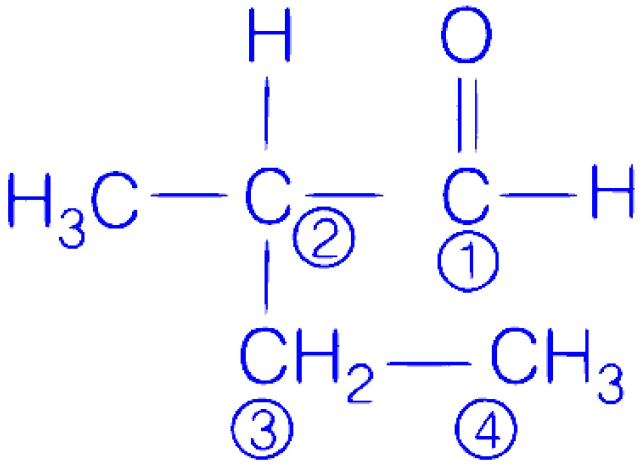
C. 3-methylisobutyraldehyde

D. 2-ethylpropanal

Answer: B

Solution:

−CHO group represent aldehyde group anddenoted as ‘al’.



Branched chain is $-CH_3$ which present on2 carbon position. Principle chain containing4 carbon with aldehyde group.

IUPAC name-2 methyl butanal.

Question9

The IUPAC name of diacetone alcohol is.

AP EAPCET 2021 - 19th August Evening Shift

Options:

A. 4-hydroxy pentan-2, 4-dione

B. 3-hnydroxy pentan-2, 4-dione

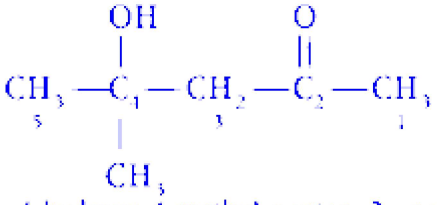
C. 4-hydroxy-4-methyl pentan-2-one

D. 4-hydroxy-3-methyl pentan-2-one

Answer: C

Solution:

Diacetone alcohol is an organic compound with the formula $CH_3C(O)CH_2C(OH)(CH_3)_2$ called DAA. It is colourless liquid and commonly used in synthetic intermediate and as solvent also.



4-hydroxy-4-methyl pentan-2-one

Note —C— is carbonyl ketonic group denoted as 'one'.
