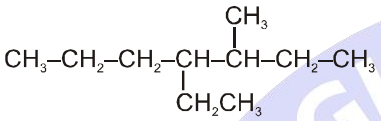
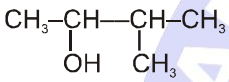
Chapter 01 Classification and Nomenclature

NEET-FLASHBACK

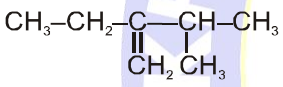
Q.1 Names of some compounds are given. Which one is not in IUPAC system: **[AIPMT 2005]**

(1) 

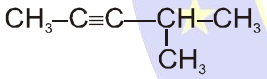
3–Methyl–4–ethyl heptane

(2) 

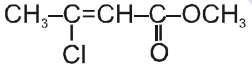
3–Methyl–2–butanol

(3) 

2–Ethyl–3–methyl–but–1–ene

(4) 

4–Methyl–2–pentyne

Q.2  is named in IUPAC as :

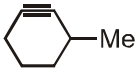
[AIPMT 2005]

(1) Methyl–3–chloro–2–butenoate

(2) Methyl–4–chloro–2–pentanoate

(3) Methoxy–3–chloro butanol

(4) Methoxy–2–chloro butanone

Q.3  is named in IUPAC as :

[AIPMT 2005]

(1) 3–Methyl cyclohexyne

(2) 2–Methyl cyclohexyne

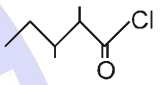
(3) 4–Methyl cyclohexyne

(4) 1–Methyl–2–cyclohexyne

Q.4 The general molecular formula, which represents the homologous series of alkanols is: **[AIPMT 2006]**

(1) $C_nH_{2n}O_2$ (2) $C_nH_{2n}O$

(3) $C_nH_{2n+1}O$ (4) $C_nH_{2n+2}O$

Q.5 The IUPAC name of  is:

[AIPMT 2006]

(1) 3,4–dimethylpentanoyl chloride

(2) 1–chloro–1–oxo–2,3–dimethylpentane

(3) 2–ethyl–3–methylbutanoyl chloride

(4) 2,3–dimethylpentanoyl chloride

Q.6 In the hydrocarbon

$CH_3 - CH = CH - CH_2 - C \equiv CH$

6 5 4 3 2 1

The state of hybridization of carbons 1, 3 and 5 are in the following sequence: **[AIPMT 2008]**

(1) sp, sp^2, sp^3 (2) sp^3, sp^2, sp

(3) sp^2, sp, sp^3 (4) sp, sp^3, sp^2

Q.7 The IUPAC name of the compound having the formula $CH \equiv C - CH = CH_2$ is: **[AIPMT 2009]**

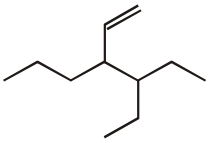
(1) 1–buten–3–yne (2) 3–buten–1–yne

(3) 1–butyn–3–ene (4) but–1–yn–3–ene

Q.8 The IUPAC name of the compound $CH_3CH=CHC\equiv CH$ is : **[AIPMT 2010]**

(1) Pent-3-en-1-yne (2) Pent-2-en-4-yne

(3) Pent-1-yn-3-ene (4) Pent-4-yn-2-ene

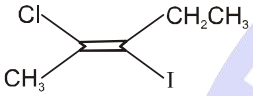
Q.9 The correct IUPAC name of the compound  is : **[AIPMT PRE.-2011]**

(1) 4-Ethyl-3-propyl hex-1-ene

(2) 3-Ethyl-4-ethenyl heptane

(3) 3-Ethyl-4-propyl hex-5-ene

(4) 3-(1-ethyl propyl) hex-1-ene

Q.10 The IUPAC name of the following compound  is :

[AIPMT MAINS-2011]

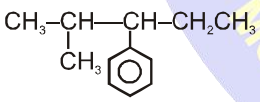
(1) cis-2-chloro-3-iodo-2-pentene

(2) trans-2-chloro-3-iodo-2-pentene

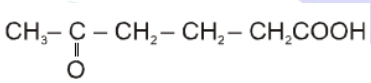
(3) cis-3-iodo-4-chloro-3-pentene

(4) trans-3-iodo-4-chloro-3-pentene

Q.11 Which nomenclature is not according to IUPAC system? **[AIPMT PRE-2012]**

(1) 

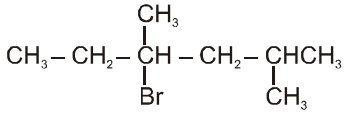
2-Methyl-3-phenylpentane

(2) 

5-Oxohexanoic acid

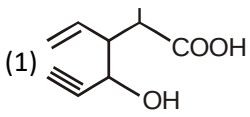
(3) $Br - CH_2 - CH = CH_2$

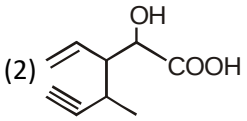
1-Bromo-prop-2-ene

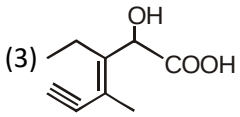
(4) 

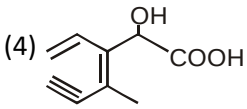
4-Bromo,2,4-di-methylhexane

Q.12 Structure of the compound whose IUPAC name is 3–Ethyl–2–hydroxy–4–methylhex–3–en–5–ynoic acid is : **[NEET UG-2013]**

(1) 

(2) 

(3) 

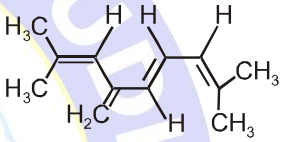
(4) 

Q.13 Which of the following organic compounds has same hybridization as its combustion product CO_2? **[AIPMT-2014]**

(1) Ethane (2) Ethyne

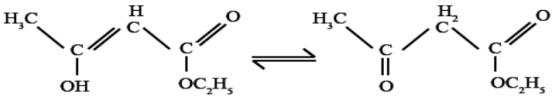
(3) Ethene (4) Ethanol

Q.14 The total number of p-bond electrons in the following structure is: **[AIPMT-2015]**



(1) 8 (2) 12 (3) 16 (4) 4

Q.15 The enolic form of ethyl acetoacetate as below has:



[AIPMT-2015]

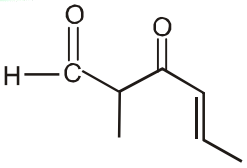
(1) 16 sigma bonds and 1 pi-bond

(2) 9 sigma bonds and 2 pi-bond

(3) 9 sigma bonds and 1 pi-bond

(4) 18 sigma bonds and 2 pi-bond

Q.16 The IUPAC name of the compound

 is : **[NEET–2017]**

(1) 3–keto–2–methylhex–4–enal

(2) 5–formylhex–2–en–3–one

(3) 5–methyl–4–oxohex–2–en–5-al

(4) 3–keto–2–methylhex–5-enal

Q.17 Which of the following molecules represents the order of hybridisation sp^2, sp^2, sp, sp from left to right atoms? **[NEET-2018]**

(1) HC≡C–C≡CH (2) CH_2=CH–C≡CH

(3) CH_2=CH–CH=CH_2 (4) CH_3–CH=CH–CH_3

Q.18 The number of sigma (σ) and pi (π) bonds in pent-2-en-4-yne is : **[NEET-2019]**

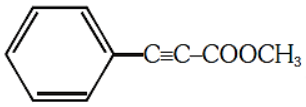
(1) 11 σ bonds and 2 π bonds

(2) 13 σ bonds and no π bonds

(3) 10 σ bonds and 3 π bonds

(4) 8 σ bonds and 5 π bonds

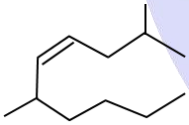
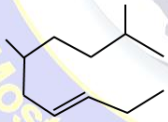
Q.19 How many (i) sp^2 hybridised carbon atoms and (ii) π bonds are present in the following compound ? **[NEET-Recovid-2020]**

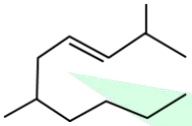
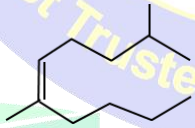


(1) 7, 5 (2) 8, 6

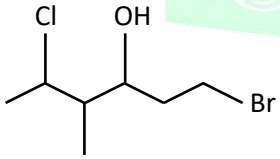
(3) 7, 6 (4) 8, 5

Q.20 The correct structure of 2, 6-Dimethly-dec-4-ene is : **[NEET-2021]**

(1)  (2) 

(3)  (4) 

Q.21 The correct IUPAC name of the following compound is: **[NEET 2022]**



(1) 6-bromo-4-methyl-2-chlorohexan-4-ol

(2) 1-bromo-5-Chloro-4-methylhexan-3-ol

(3) 6-bromo-2-chloro-4-methylhexan-4-ol

(4) 1-bromo-4-methyl-5-chlorohexan-3-ol

ANSWER KEY

NEET-FLASHBACK

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	1	1	1	4	4	4	1	1	1	2	3	3	2	1	4
Que.	**16**	**17**	**18**	**19**	**20**	**21**									
Ans.	1	2	3	3	1	2									