- - (1) 3-hydroxy cyclohex-5-en carboxylic acid
 - (2) 5-hydroxy cyclohex-2-en carboxylic acid
 - (3) 5-hydroxy cyclohexanoic acid
 - (4) 3-hydroxy cyclohex-5- enoic acid
- 2. The IUPAC name of the compound is:
 - (1) 3, 4-Dimethylbut-2-en-4-ol
 - (2) 3-Methylpent-2-en-4-ol
 - (3) 3-Methylpent-3-en-2-ol
 - (4) 1, 2-Dimethylbut-2-en-1-ol
- **3.** The correct IUPAC name of

- (1) 3, 4 dichloro-6-[4-chloro-2-(hydroxymethyl)-5-oxohexyl] cyclohexane -1- carboxylic acid
- (2) 4,5-dichloro-2-[4-acetyl-4-chloro-2-(hydroxymethyl butyl)] cyclohexane -1- carboxylic acid.
- (3) 4-5-dichloro-2-[4-chloro-2-(hydroxymethyl)-5-oxohexyl] cyclohexane -1- carboxylic acid.
- (4) None of the above
- **4.** Select the structure with correct numbering for IUPAC name of the compound -

(3)
$${}_{5} = \underbrace{{}_{11}^{11}}_{OH} OH$$

$$(4) \stackrel{2}{\underset{3}{\bigvee}} \stackrel{\text{SH}}{\underset{1}{\bigvee}} \stackrel{\text{OH}}{\underset{5}{\bigvee}}$$

5. The number of functional groups present is the following compound is:-

$$H_{2N}$$
 O O O O O

- (1)5
- (2)7
- (3)6
- (4) 8
- **6.** Alicyclic compounds are
 - (1) Aromatic compounds
 - (2) Aliphatic cyclic compounds
 - (3) Heterocyclic compounds
 - (4) None of the above
- **7.** How many 1°, 2°, 3° C atoms does 1, 3, 5-Trimethyl cyclohexane have?
 - (1) 3, 6, 0
- (2) 3, 4, 2
- (3) 0, 3, 6
- (4) 3, 3, 3
- **8.** The compound which has one isopropyl group is:
 - (1) 2,2,3,3-Tetramethyl pentane
 - (2) 2,2-Dimethyl pentane
 - (3) 2,2,3-Trimethyl pentane
 - (4) 2-Methyl pentane
- **9.** Which of the following is the first member of ester homologous series?
 - (1) Ethyl ethanoate
- (2) Methyl ethanoate
- (3) Methyl methanoate
- (4) Ethyl methanoate
- **10.** The molecular formula of the first member of the family of alkenynes and its name is given by the set
 - $(1) C_3H_6$, Alkene
 - (2) C₅H₆, Pent-1-en-3-yne
 - (3) C_6H_8 , Hex-1-en-5-yne
 - (4) C_4H_4 , Butenyne
- **11.** Which of the following is a heterocyclic compound

$$\begin{array}{c|c}
HC = CH \\
 & | \\
HC = CH
\end{array}$$

$$HC = COOH$$

 $HC = COOH$

$$HC = CH$$
(3) \downarrow CH_2

$$HC = CH$$
 $C=O$

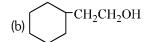
12. The IUPAC name of

$$CH = CH - CHCH2CH3 is: CH3$$

- (1) 1-Cyclohexyl-3-methylpent-1-ene
- (2) 3-Methyl-5-cyclohexylpent-1-ene
- (3) 1-Cyclohexyl-3-ethylbut-1-ene
- (4) 1-Cyclohexyl-3,4-dmethyl-but-1-ene

- **13.** IUPAC name of $CH_2 = CH CN$ is:
 - (1) Ethenenitrile
- (2) Vinyl cyanide
- (3) Cyono ethene
- (4) Prop-2-enenitrile
- 14. The IUPAC name of

- (1) N-Methyl-N-ethyl ethanamine
- (2) Diethyl methanamine
- (3) N-Ethyl-N-methyl ethanamine
- (4) Methyl diethyl ethanamine



True statement for the above compounds is:

- (1) (a) is phenol while (b) is alcohol
- (2) Both (a) and (b) are primary alcohol
- (3) (a) is primary and (b) is secondary alcohol
- (4) (a) is secondary and (b) is primary alcohol
- **16.** The IUPAC name of $(C_2H_5)_2$ NCH $_2$ CH.COOH is
 - (1) 2-Chloro-4-N-ethylpentanoic acid
 - (2) 2-Chloro-3-(N,N-diethyl amino)-propanoic acid
 - (3) 2-Chloro-2-oxo diethylamine
 - (4) 2-Chloro-2-carboxy-N-ethyl ethane
- **17.** Which of the following compound is wrongly named?

2-Chloro pentanoic acid

(2)
$$CH_3C \equiv CCHCOOH$$
; CH_3

2-Methyl hex-3-enoic acid

- $\begin{array}{l} \text{(3) CH}_3\text{CH}_2\text{CH=CHCOCH}_3\,;\\ \text{Hex-3-en-2-one} \end{array}$
- (4) $CH_3 CHCH_2CH_2CHO$; CH_3
 - 4-Methyl pentanal

18. The correct IUPAC name of the following compound is:

$$\begin{array}{ccc} \mathbf{O} = \mathbf{C} - \mathbf{C}\mathbf{H}_2 - \mathbf{C}\mathbf{H} - \mathbf{C}\mathbf{H}\mathbf{O} \\ & | & | \\ \mathbf{O}\mathbf{H} & \mathbf{H} - \mathbf{C} = \mathbf{O} \end{array}$$

- (1) 3,3-Diformylpropanoic acid
- (2) 3-Formyl-4-oxo-butanoic acid
- (3) 3,3-Dioxo propanoic acid
- (4) 3,3-Dicarbaldehyde propanoic acid
- **19.** One among the following is the correct IUPAC name of the compound

$$\begin{matrix} & H \\ | \\ CH_3CH_2-N-CHO \end{matrix}$$

- (1) N-Formyl aminoethane
- (2) N-Ethyl formyl amine
- (3) N-Ethyl methanamide
- (4) Ethylamino methanal
- **20.** The IUPAC name of $C_6H_5CH=CH-COOH$ is:
 - (1) Cinnamic acid
 - (2) 1-Phenyl-2-carboxy ethane
 - (3) 3-Phenyl prop-2-enoic acid
 - (4) Dihydroxy-3-phenyl propionic acid
- **21.** IUPAC name will be $CH_2 CH CH_2$ $\begin{vmatrix} & & & \\ & & &$
 - (1) 1,2,3-Tricyano propane
 - (2) Propane-1,2,3- trinitrile
 - (3) 1,2,3-Cyano propane
 - (4) Propane-1,2,3-tricarbonitrile
- **22.** The IUPAC name of

- (1) 1-Acetoxy acetic acid
- (2) 2-Acetoxy ethanoic acid
- (3) 2-Ethanoyloxyacetic acid
- (4) 2-Ethanoyloxyethanoic acid
- 23. The IUPAC name of

$$\begin{array}{c} {\rm CH}_2-{\rm CHO} \\ | \\ {\rm OHC-CH}_2-{\rm CH}_2-{\rm CH-CH}_2-{\rm CHO} \ {\rm is} : \end{array}$$

- (1) 4,4-Di(formylmethyl) butanal
- (2) 2-(Formylmethyl) butane-1, 4-dicarbaldehyde
- (3)Hexane-3-acetal-1, 6-dial
- (4) 3-(Formylmethyl) hexane-1, 6-dial

24. Structural formula of isopropyl methanoate is:

(2)
$$H-C-O-CH_2-CH-CH_3$$

 $||$ CH_3

(3)
$$CH_3 - C - O - CH_2 - CH_2$$

 $| CH_3 - CH_3 -$

(4)
$$H-C-O-CH-CH_3$$

 $||$ $|$ $|$ CH_3

- **25.** The correct order of priority of the functional groups used as suffix will be :-
 - (1) -COOH > -CHO > -CN > C = O
 - (2) -COOH > -CHO > C=O > -CN
 - (3) > C = O > CN > -COOH > -CHO
 - (4) -COOH > -CN > -CHO > C=O
- **26.** For which of the following compounds, the IUPAC name is wrong?

Compound IUPAC Name

(1)
$$CH_3$$
 O $C-NH_2$ 2-methyl cyclopentane

carboxamide

$$(4) \qquad \qquad COOCH_3$$

Methyl-2 bromo cyclohexane carboxylate **27.** What is the correct IUPAC name of the following compound?

- (1) 3-(2-cyanopropyl)-N-ethyl pentanamide
- (2) N-ethyl-3-(2-cyanopropyl) pentanamide
- (3) N,3-diethyl-4-cyanohexanamide
- (4) 5-cyano-N, 3-diethyl hexanamide
- **28.** Which of the following correct IUPAC name of:-

- (1) 1,1,-Dimethylpropyl
- (2) 1,2-Dimethylpropyl
- (3) Active iso sec pentyl
- (4) 3-Methyl butyl
- **29.** IUPAC name of $CH_2 = CH CH_2 is$:
 - (1) 1-Propene
- (2) 1-Propenyl
- (3) 2-Propenyl
- (4) Allyl
- **30.** Number of σ and π bond in phenyl cyanide respectively :-
 - (1) 7σ and 2π
- (2) 12σ and 5π
- (3) 8σ and 2π
- (4) 13σ and 5π
- **31.** Which of the following structure contain aldehyde functional group:-
 - (1) CH₃-NH-C=O | | H
- (2) Cl–C=O | |
- (3) H₂N-CH₂-C=O | | H
- (4) All of these

32. IUPAC name is :-

- (1) 2-Methyl pent-3-ene
- (2) 4-Methyl pent-2-ene
- (3) 3-Methyl pent-2-ene
- (4) 3-Methyl pent-3-ene

				AN	ISWER K	EY	Exercise-I			
Que.	1	2	3	4	5	6	7	8	9	10
Ans.	2	3	3	2	3	2	4	4	3	4
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	1	1	4	3	4	2	2	2	3	3
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	4	4	4	4	4	2	4	2	3	4
Que.	31	32								
Ans.	3	2								

PREVIOUS YEARS' QUESTIONS

EXERCISE-II

1. The correct IUPAC name of the compound is-

[IIT-90]

- (1) 5,6-diethyl-8-methyl dec-6-ene
- (2) 5,6-diethyl-3-methyl dec-4-ene
- (3) 6-butyl-5-ethyl-3-methyl oct-4-ene
- (4) 2,4,5-triethyl-3-ene
- 2. The IUPAC name of -

IIIT-911

- (1) 5-Vinyloct-3-en-1-al
- (2) 4-Butylhexa-2,5-dien-1-al
- (3) 5-Vinyloct-5-en-8-al
- (4) 3-Butylhexa-1,4-dien-8-al
- 3. IUPAC nomenclature of the given organic compound (CH₃)₂C(CH₂CH₃)CH₂CH(Cl)CH₃ will be -[Bihar CEE 2001]
 - (1) 5-Chloro-3,3-dimethyl hexane
 - (2) 4-Chloro-2-ethyl-2-methylpentane
 - (3) 2-Chloro-4-ethyl-4-methylpentane
 - (4) 2-Chloro-4,4-dimethylhexane
- Which of the following compound has wrong IUPAC 4. [AIEEE -2002]
 - (1) CH₂CH₂—CH₂COO—CH₂CH₃ (Ethyl butanoate)
 - (2) $CH_3 CH CH_2 CHO$ (3-Methylbutanal)

(3)
$$CH_3-CH-CH-CH_3$$
 (2-Methyl-3-butanol) OH CH_3 (4) $CH_3-CH-C-CH_2-CH_3$ CH CH_3 O

(2-Methyl-3-pentanone)

5. The IUPAC name of CH₂COCH(CH₂)₂ is

[AIEEE-2003]

- (1) isopropyl methyl ketone
- (2) 2-methyl-3-butanone
- (3) 4-methylisopropyl ketone
- (4) 3-methyl-2-butanone

The IUPAC name of the compound 6.

is

[AIEEE-2004]

- (1) 1, 1-dimethyl-3-cyclohexanol
- (2) 1, 1-dimethyl-3-hydroxy cyclohexane
- (3) 3, 3-dimethyl-1-cyclohexanol
- (4) 3, 3-dimethyl-1-hydroxy cyclohexane
- 7. Choose the correct molecular formula of the following molecules: [VITEEE-2005]
 - (i) Propanone, (ii) Propanal and (iii) n-propanol
 - (1) CH₃COCH₃,CH₃CH₂CH₂OH and CH₃CH₂ CHO
 - (2) $CH_3CH_2CH_2OH, CH_3COCH_3$ and CH₂CH₂CHO
 - (3) CH₃CH₂CHO,CH₃COCH₃ and CH₃CH₂CH₂OH
 - (4) CH_3COCH_3 , CH_3CH_2CHO and CH₃CH₂CH₂OH
- 8. The IUPAC name of the compound is



[AIEEE-2006]

- (1) 6-bromo-2-chlorocyclohexene
- (2) 3-bromo-1-chlorocyclohexene
- (3) 1-bromo-3-chlorocyclohexene
- (4) 2-bromo-6-chlorocyclohex-1-ene
- IUPAC name of C_6H_5-C-Cl 9. [IIT-2006]
 - (1) Benzoylchloride
 - (2) Benzenecarbonylchloride
 - (3) Chlorophenyl ketone
 - (4) Phenylchloroketone
- 10. The correct decreasing order of priority for the functional groups of organic compounds in the IUPAC system of nomenclature is [AIEEE -2008]
 - (1) -COOH, SO₃H, -CONH₂, -CHO
 - (2) -SO₃H, -COOH, -CONH₂, CHO
 - (3) -CHO, -COOH, -SO₂H, -CONH₂
 - (4) -CONH₂, -CHO, -SO₂H, -COOH

11. The IUPAC name of neopentane is :-

[AIEEE -2009]

- (1) 2-methylpropane
- (2) 2, 2-dimethylbutane
- (3) 2-methylbutane
- (4) 2, 2-dimethylpropane
- The IUPAC name of the following compound **12**.

[IIT-JEE-2009]

- (1) 4-Bromo-3-cyanophenol
- (2) 2-Bromo-5-hydroxybenzonitrile
- (3) 2-Cyano-4-hydroxybromobenzene
- (4) 6-Bromo-3-hydroxybenzonitrile

13. The IUPAC name of the compound

$$H_2C$$
 $CH - CH_3$ is :-

[AIEEE-2012 (Online)]

- (1) 1, 2-Epoxy propane(2) Propylene oxide
- (3) 1, 2-Oxo propane
- (4) 1, 2-Propoxide

PREVIOUS YEARS QUESTIONS				ANSWER KEY			Exercise-II				
Que.	1	2	3	4	5	6	7	8	9	10	
Ans.	2	2	4	3	4	3	4	2	2	1	
Que.	11	12	13								
Ans.	4	2	1								