

Max. Marks: 120
Important Instructions:

Max. Time : 1 Hour

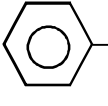
TEST-1

A. General :

1. The test paper is of 1 hour duration.
2. The Test Paper consists of 30 questions and each questions carries 4 Marks.

B. Test Paper Format and its Marking Scheme:

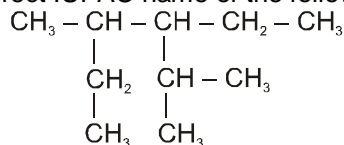
1. This paper contains 30 multiple choice questions. Each question has four choices (1), (2), (3) and (4) out of which **ONE** is correct. For each question in Section-1, you will be awarded 4 marks if you give the corresponding to the correct answer and zero mark if no given answers. In all other cases, minus one (**-1**) mark will be awarded.

1. IUPAC name of  is

- | | |
|-----------------------------------|-------------------------------------|
| (1) N-Deutero-N-formylbenzenamine | (2) N-Phenylamino-N-deuteromethanal |
| (3) N-Deutero-N-phenylmethanamide | (4) N-Deutero benzene carboxamide |

2. In the organic compound $\overset{1}{\text{CH}_2}=\overset{2}{\text{CH}}-\overset{3}{\text{CH}_2}-\overset{4}{\text{CH}_2}-\overset{5}{\text{C}}\equiv\overset{6}{\text{CH}}$, the pair of hybridised orbitals involved in the formation of : C_2-C_3 bond is :
- | | | | |
|-----------------------------|-----------------------------|-------------------------------|-------------------------------|
| (1) $\text{sp}-\text{sp}^2$ | (2) $\text{sp}-\text{sp}^3$ | (3) sp^2-sp^3 | (4) sp^3-sp^3 |
|-----------------------------|-----------------------------|-------------------------------|-------------------------------|

3. The correct IUPAC name of the following compound is

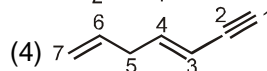
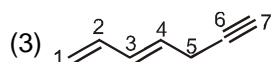
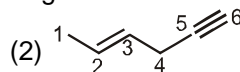
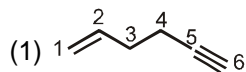


- | | |
|--------------------------------|--------------------------------|
| (1) 4-Ethyl-3,5-dimethylhexane | (2) 2,4-Dimethyl-3-ethylhexane |
| (3) 3-Ethyl-2,4-dimethylhexane | (4) 3-Isopropyl-4-methylhexane |

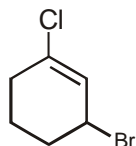
4. Which IUPAC name is incorrect among the following compounds ?

- | | |
|---|-----------------------------|
| (1) $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}_2-\text{Cl}$ | 1-Chlorobut-2-ene |
| (2) $\text{HC}\equiv\text{C}-\text{CH}_2-\text{CH}_2-\text{Br}$ | 1-Bromobut-3-yne |
| (3) $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{CH}_2$ | Penta-1,3-diene |
| (4) $\begin{array}{c} \text{Br} \quad \quad \text{Cl} \\ \quad \quad \\ \text{CH}_3-\text{CH}-\text{CH}_2-\text{C}-\text{CH}_3 \\ \\ \text{Cl} \end{array}$ | 4-Bromo-2,2-dichloropentane |

5. Which of the following represent incorrect numbering.



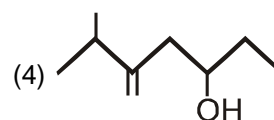
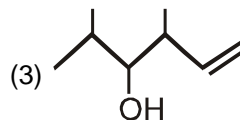
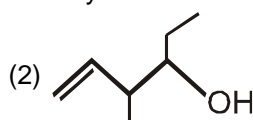
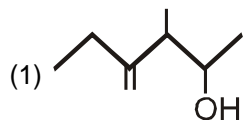
6. The IUPAC name of the compound shown below is



- (1) 2-Bromo-6-chlorocyclohex-1-ene
(3) 3-Bromo-1-chlorocyclohex-1-ene

- (2) 6-Bromo-2-chlorocyclohexene
(4) 1-Bromo-3-chlorocyclohexene

7. What is the structure of 4-Methylhex-5-en-3-ol.

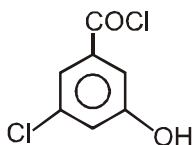


8. A compound having straight chain of five carbon atoms has one ketone group and two methyl groups on different-different carbon atoms. The IUPAC name of the compound is :

- (1) 2,4-Dimethyl-3-oxopentane
(3) 3,4-Dimethyl-2-oxopentane

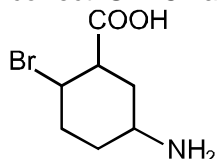
- (2) 2,4-Dimethylpentan-3-one
(4) 3,3-Dimethylpentan-2-one

9. What is the IUPAC name of



- (1) 5-Chloro-3-hydroxybenzenecarbonyl chloride.
(2) 3-Hydroxy-5-chlorobenzenecarbonyl chloride.
(3) 3-Chloro-5-hydroxybenzenecarbonyl chloride.
(4) 1-Chlorocarbonyl-3-chlorobenzen-1-ol

10. The correct IUPAC name of compound is :



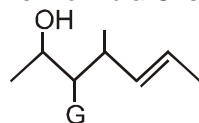
- (1) 3-Amino-6-bromocyclohexane-1-carboxylic acid
(2) 2-Bromo-5-aminocyclohexane-1-carboxylic acid
(3) 5-Amino-2-bromocyclohexane-1-carboxylic acid
(4) 4-Bromo-5-carboxycyclohexanamine

11. The IUPAC name of $\text{CH}_3\text{--CH}_2\text{--N(CH}_3\text{)--CH}_2\text{--CH}_3$ is :

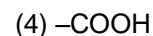
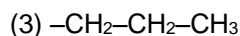
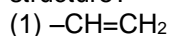
- (1) N-Methyl-N-ethyl ethanamine
(3) N-Ethyl-N-methyl ethanamine

- (2) Diethyl methanamine
(4) Methyl diethyl ethanamine

12. In the given formula G is an unknown group.



What will be the group G, which can change the word root (parent carbon chain length) of above structure?



1. Which of the following compounds has wrong IUPAC name:

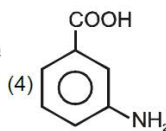
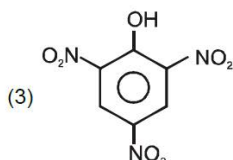
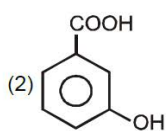
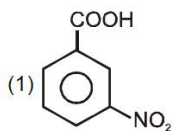
(1) $\text{CH}_3\text{--CH}_2\text{--CH}_2\text{--COO--CH}_2\text{CH}_3 \rightarrow$ Ethyl butanoate

(2) $\text{CH}_3\text{--CH--CH}_2\text{--CHO} \rightarrow$ 3-Methylbutanal

(3) $\text{CH}_3\text{--CH--CH--CH}_3 \rightarrow$ 2-Methyl-3-butanol

(4) $\text{CH}_3\text{--CH--C(=O)--CH}_2\text{--CH}_3 \rightarrow$ 2-Methyl-3-pentanone

14. Pricric acid is :



15. The general formula $\text{C}_n\text{H}_{2n}\text{O}_2$ could be for open chain

(1) diketones

(2) carboxylic acids

(3) diols

(4) dialdehydes.

4. The IUPAC name of the compound is

(1) 3, 3-dimethyl-1-hydroxycyclohexane

(2) 1, 1-dimethyl-3-hydroxycyclohexane

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

(4) 1, 1-dimethyl-3-cyclohexanol

17. How many sigma bonds and pi bonds are present in $\text{CH}_2=\text{C}=\text{CH}_2$?

(A) 6 sigma and 1 pi

(B) 8 sigma and 0 pi

(C) 4 sigma and 4 pi

(D) 6 sigma and 2 pi

20. The IUPAC name of is :

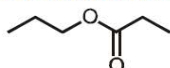
(A) 2-Bromo-3-methylbut-3-ene

(B) 4-Bromo-3-methylpent-2-ene

(C) 2-Bromo-3-methylpent-3-ene

(D) 4-Bromo-2,3-dimethylbut-2-ene

21. The IUPAC name of the following compound is :



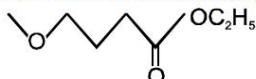
(A) n-Propyl ethanoate

(B) Ethyl propanoate

(C) Pentanoic anhydride

(D) n-Propyl propanoate

23. The IUPAC name of the following compound is :



(A) 3-Methoxy ethylpropanoate

(B) Ethyl 4-methoxybutanoate

(C) 1,4-Diethoxybutane

(D) Ethoxy 3-methoxybutyrate

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



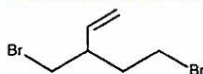
(A) 2-Bromo-5-methylbicyclo[5.4.0]heptanes

(B) 3-Bromo-7-methylbicyclo[3.2.0]heptanes

(C) 3-Bromo-6-methylbicyclo[3.2.0]heptanes

(D) 2-Methyl-6-bromobicyclo[2.3.0]heptane

22. The IUPAC name of the following compounds is



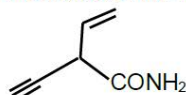
(A) 5-Bromo-3-(bromomethyl)pent-1-ene

(B) 3-(1-Bromomethyl)-4-bromobut-1-ene

(C) 1,4-Dibromo-3-ethenylbutane

(D) 1-Bromo-3-(bromomethyl) but-4-ene

23. The IUPAC name of the following compound is



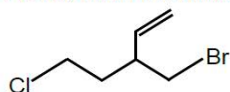
(A) 3-Aminocarbonylpent-1-en-4-yne

(B) 2-Ethenylbut-3-yn-1-amide

(C) 2-Ethynylbut-3-en-1-amide

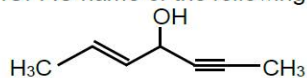
(D) 3-Aminocarbonylpent-4-en-1-yne

24. The IUPAC name of the following compound is



- (A) 1-Bromo-4-chloro-3-ethenylbutane
(B) 4-Bromo-1-chloro-3-ethenylbutane
(C) 3-(Bromomethyl)-5-chloropent-1-ene
(D) 3-(Bromomethyl)-1-chloropent-4-ene

28. IUPAC name of the following molecule is



- (A) 4-hydroxyhept-2-en-5-yne
(B) hept-2-en-5-yn-4-ol
(C) hept-5-en-2-yn-4-ol
(D) 4-hydroxyhept-5-en-2-yne

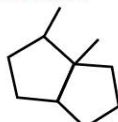
26. All four types of carbon (1° , 2° , 3° and 4°) are present in



I
(A) I, II and III



II
(B) II, III and IV



III
(C) I, II and IV



IV
(D) II and IV

9. Which of the following statements are incorrect for aniline.

- (A) Compound is heterocyclic hydrocarbon.
(B) Number of σ bonds are 8.
(C) Degree of unsaturation of the compound is 3
(D) It contains functional group amine

10. Select correct IUPAC name.

- (A) Methane-1,1,1,1-tetracarboxylic acid
(B) 5-Carbonyl-heptane-1,7-dioic acid
(C) 2-Chloro ethanoyl chloride
(D) 1-Bromo-3-fluoro-4-methyl cyclohexane

11. Which of the following IUPAC name(s) is/are incorrect :

- (A) 4-Chloro-3-methyl cyclopentanol
(B) 1-Amino-3-bromohexan-1-one
(C) 4-chloro-3-methylcyclohexane carboxylic acid
(D) 3-Bromo-1-methylhexan-1-ol

12. Which of the following represent correct pair of homologous ?

