

ONE MARK REVISION TEST

Class: XI

Code: A1118

Max. Marks: 25

11. FUNDAMENTALS IN ORGANIC CHEMISTRY

I. Choose the correct Answer

25 x 1 = 25

1. How many cyclic and acyclic isomers are possible for the molecular formula C_3H_6O ?

- a) 4 b) 5 c) 9 d) 10

2. Which one of the following shows functional isomerism?

- a) ethylene b) Propane c) ethanol d) CH_2Cl_2

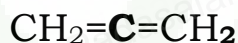
3. Which of the following names does not fit a real name?

- a) 3 - Methyl -3-hexanone c) 3- Methyl -3- hexanol
b) 4-Methyl -3- hexanone d) 2- Methyl cyclo hexanone.

4. The IUPAC name of $CH_3-CH=CH-C\equiv CH$ is

- a) Pent-4-yn-2-ene c) pent-2-en-4- yne
b) Pent-3-en-1-yne d) Pent -1-yn-3-ene

5. Hybridization of underlined carbon in allene compound is

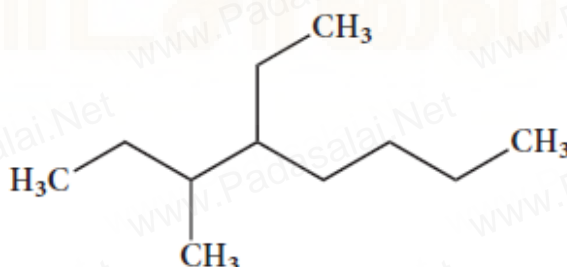


- a) sp b) sp^2 c) sp^3 d) dsp^2

6. The general formula for alkadiene is

- a) C_nH_{2n} b) C_nH_{2n-1} c) C_nH_{2n-2} d) C_nH_{n-2}

7. The IUPAC name of the Compound is



- a) 2,3-dimethylheptane c) 5-ethyl-6-methyloctane
b) 3-Methyl-4- ethyloctane d) 4-Ethyl -3 - methyloctane

8. In an organic compound, phosphorus is estimated as

- a) $Mg_2P_2O_7$ b) $Mg_3(PO_4)_2$ c) H_3PO_4 d) P_2O_5

9. Consider the following statement.

- a) Pentanal does not show position isomerism.
- b) Meso – tartaric acid is optically active in nature.
- c) Ethanol is functional isomers with Dimethyl ethers.

Which of the above statements is/are correct?

- a) (ii) only
- b) Both (i) and (ii)
- c) Both (i) and (iii)
- d) none of the above

10. Nitrogen detection in an organic compound is carried out by Lassaigne's test. The blue colour formed is due to the formation of.

- a) $\text{Fe}_3 [\text{Fe}(\text{CN})_6]_2$
- b) $\text{Fe}_4 [\text{Fe}(\text{CN})_6]_3$
- c) $\text{Fe}_4 [\text{Fe}(\text{CN})_6]_2$
- d) $\text{Fe}_3 [\text{Fe}(\text{CN})_6]_3$

11. Which of the following is optically active alcohol?

- a) 1-propanol
- b) 2-propanol
- c) 1-butanol
- d) 2-butanol

12. Lassaigne's test for the detection of nitrogen fails in

- a) $\text{H}_2\text{N}-\text{CO}-\text{NHNH}_2 \cdot \text{HCl}$
- b) $\text{H}_2\text{NNH}_2 \cdot \text{HCl}$
- c) $\text{C}_6\text{H}_5-\text{NHNH}_2 \cdot \text{HCl}$
- d) $\text{C}_6\text{H}_5 \text{CONH}_2$

13. Match the following:

| Functional Group | | Compound | |
|------------------|--------------------|----------|--------------|
| A | -CHO | 1 | Propanone |
| B | -NO ₂ | 2 | Acetamide |
| C | >C=O | 3 | Ethanal |
| D | -CONH ₂ | 4 | Nitrobenzene |

- | | | | | | | | | | |
|----|----------|----------|----------|----------|----|----------|----------|----------|----------|
| | A | B | C | D | | A | B | C | D |
| a) | 3 | 4 | 1 | 2 | c) | 3 | 1 | 4 | 2 |
| b) | 4 | 1 | 2 | 3 | d) | 4 | 3 | 1 | 2 |

14. Connect pair of compounds which give blue colouration / precipitate and white precipitate respectively, when their Lassaigne's test is separately done.

- a) $\text{NH}_2\text{NH}_2 \cdot \text{HCl}$ and ClCH_2-CHO
- b) NH_2CSNH_2 and $\text{CH}_3-\text{CH}_2\text{Cl}$
- c) $\text{NH}_2\text{CH}_2\text{COOH}$ and NH_2CONH_2
- d) $\text{C}_6\text{H}_5\text{NH}_2$ and ClCH_2-CHO .

15. Select the molecule which has only one π -bond.

- a) $\text{CH}_3\text{CH} = \text{CHCH}_3$ c) $\text{CH}_3\text{CH} = \text{CHCOOH}$
 b) $\text{CH}_3\text{CH} = \text{CHCHO}$ d) All of these

16. Number of stereoisomers of 1, 2-dihydroxycyclopentane

- a) 1 b) 2 c) 3 d) 4

17. Sodium nitroprusside reacts with Sulphide ion to give a purple colour due to the formation of

- a) $[\text{Fe}(\text{CN})_5 \text{NO}]^{3-}$ c) $[\text{Fe}(\text{CN})_5 \text{NOS}]^{4-}$
 b) $[\text{Fe}(\text{NO})_5 \text{CN}]^+$ d) $[\text{Fe}(\text{CN})_5 \text{NOS}]^{3-}$

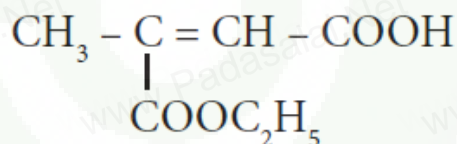
18. Ortho and para-nitro phenol can be separated by

- a) Azeotropic distillation c) Steam distillation
 b) Destructive distillation d) Cannot be separated

19. The purity of an organic compound is determined by

- a) Chromatography c) melting or boiling point
 b) Crystallisation d) both (a) and (c)

20. Assertion: Organic compound is given below named as 3-carbethoxy-2-butenic acid



Reason: Principal functional group gets lowest number followed by double bond (or) triple bond.

- a) Both assertion and reason are true and reason is the correct explanation of assertion.
 b) Both assertion and reason are true but reason is not the correct explanation of assertion.
 c) Assertion is true but reason is false.
 d) Both assertion and reason are false.

21. Fill in the blank:

**pentan-2-one; pentan-2-one; 3-methylbutan-2-one
 1-methoxypropane; 2-methoxypropane; _____.**

- a) Dimethyl ether c) Dimethyl ketone
 b) Diethyl ether d) 3-methoxypropane

22. The compound that shows geometrical isomer is ____

- a) 1-propene b) 1-butene c) 2-butene d) Both (a) and (b)

23. A sample of 0.5g of an organic compound was treated according to Kjeldahl's method. The ammonia evolved was absorbed in 50 mL of 0.5M H_2SO_4 . The remaining acid after neutralization by ammonia consumed 80 mL of 0.5 M NaOH, % of nitrogen in the organic compound is.

- a) 14% b) 28% c) 42% d) 56%

24. The oxidation state of C in CH_2Cl_2 is

- a) 0 b) 1 c) 2 d) 4

25. From the following organic compounds, find the Aromatic non-benzenoid compound:

