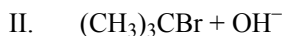
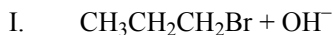


ORGANIC – IB EXAMINATION – MULTIPLE CHOICE QUESTIONS

1. What product results from the reaction of $\text{CH}_2=\text{CH}_2$ with Br_2 ?
- A. CHBrCHBr B. CH_2CHBr C. $\text{CH}_3\text{CH}_2\text{Br}$ D. $\text{CH}_2\text{BrCH}_2\text{Br}$
2. What is the final product formed when $\text{CH}_3\text{CH}_2\text{OH}$ is refluxed with acidified potassium dichromate(VI)?
- A. CH_3CHO B. $\text{CH}_2=\text{CH}_2$ C. CH_3COOH D. HC
3. Which of the substances below is **least** soluble in water?
- A. $\text{CH}_2\text{OHCHOHCH}_2\text{OH}$
- B. $\text{CH}_3\overset{\text{O}}{\parallel}\text{CCH}_3$
- C. $\text{CH}_3\text{CH}_2\overset{\text{O}}{\parallel}\text{COH}$
- D. $\text{CH}_3\overset{\text{O}}{\parallel}\text{COCH}_3$
4. Which statements support the idea that benzene contains delocalized electrons?
- I. It undergoes substitution rather than addition reactions.
- II. Its enthalpy change of combustion is greater than its enthalpy change of hydrogenation.
- III. All its carbon-carbon bonds are the same length.
- A. I and II only B. I and III only
- C. II and III only D. I, II and III
5. Which statement about the reactions of halogenoalkanes with aqueous sodium hydroxide is correct?
- A. Primary halogenoalkanes react mainly by an $\text{S}_{\text{N}}1$ mechanism.
- B. Chloroalkanes react faster than iodoalkanes.
- C. Tertiary halogenoalkanes react faster than primary halogenoalkanes.
- D. The rate of an $\text{S}_{\text{N}}1$ reaction depends on the concentration of aqueous sodium hydroxide.
6. Which compound can exist as optical isomers?
- A. $\text{H}_2\text{NCH}_2\text{COOH}$ B. $\text{CH}_2\text{ClCH}_2\text{Cl}$
- C. CH_3CHBrI D. HCOOCH_3

7. Which reaction(s) involve(s) the formation of a positive ion?



- A. I only B. II only C. Both I and II D. Neither I nor II

8. Consider the following compounds.



The compounds are treated separately with acidified potassium dichromate(VI) solution. Which will produce a colour change from orange to green?

- A. I and II only B. I and III only
C. II and III only D. I, II and III

9. What is the organic product of the reaction between ethanol and ethanoic acid?

- A. CH_3CHO
B. $\text{CH}_3\text{COOCH}_3$
C. $\text{CH}_3\text{CH}_2\text{COOCH}_3$
D. $\text{CH}_3\text{COOCH}_2\text{CH}_3$

10. Which compound is converted to butanal by acidified potassium dichromate(VI) solution?

- A. butan-1-ol B. butan-2-ol C. butanone D. butanoic acid

11. Which are characteristics typical of a free radical?

- I. It has a lone pair of electrons.
II. It can be formed by the homolytic fission of a covalent bond.
III. It is uncharged.

- A. I and II only B. I and III only C. II and III only D. I, II and III

12. Nylon is a condensation polymer made up of hexanedioic acid and 1,6-diaminohexane. Which type of linkage is present in nylon?

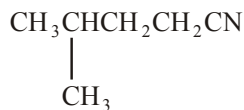
- A. Amide B. Ester C. Amine D. Carboxyl

13. What is the product of the following reaction?



- A. $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$ B. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$
C. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ D. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}$

14. What is the correct IUPAC name for the following compound?



- A. 4-methylbutanenitrile B. 4-methylpentanenitrile
C. 2-methylbutanenitrile D. 2-methylpentanenitrile
15. Which pair of compounds can be used to prepare $\text{CH}_3\text{COOCH}_3$?
- A. Ethanol and methanoic acid B. Methanol and ethanoic acid
C. Ethanol and ethanoic acid D. Methanol and methanoic acid
16. What is the organic product of the reaction between ethanol and ethanoic acid in the presence of sulfuric acid?
- A. CH_3CHO B. $\text{CH}_3\text{COOCH}_3$
C. $\text{CH}_3\text{CH}_2\text{COOCH}_3$ D. $\text{CH}_3\text{COOCH}_2\text{CH}_3$
17. Which compound can exist as optical isomers?
- A. $\text{H}_2\text{NCH}_2\text{COOH}$ B. H_3CCONH_2 C. H_3CCHBrI D. HCOOCH_3
18. Which statement about successive members of all homologous series is correct?
- A. They have the same empirical formula. B. They differ by a CH_2 group.
C. They have the same physical properties. D. They differ in their degree of unsaturation.
19. Which compound forms when hydrogen bromide is added to but-2-ene?
- A. 2-bromobutane B. 2,3-dibromobutane C. 1-bromobutane D. 1,2-dibromobutane
20. What is/are the product(s) of the reaction between ethene and hydrogen bromide?
- A. $\text{CH}_3\text{CH}_2\text{Br}$ B. $\text{CH}_3\text{CH}_2\text{Br}$ and H_2
C. $\text{CH}_2\text{BrCH}_2\text{Br}$ D. $\text{CH}_3\text{BrCH}_2\text{Br}$ and H_2

MULTIPLE CHOICE ANSWERS

1	2	3	4	5	6	7	8	9	10
D	C	D	B	C	C	B	A	D	A
11	12	13	14	15	16	17	18	19	20
C	A	D	B	B	D	C	B	A	A