

Name Key

test # 23

On the Short Answer portion of the test, please show work on all questions for partial and full credit. On the multiple choice questions, there is NO partial credit

Part 1: MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. (5 pts each, 60 pts)

1) LDPE finds applications as 1) A
 A) plastic film. B) drain pipes.
 C) plastic television trays. D) threaded bottle caps.

2) The intoxicating alcohol in "alcoholic" beverages is 2) D
 A) methyl alcohol. B) 1-propanol.
 C) rubbing alcohol. D) ethanol.

3) An example of a molecular formula of an alkane is 3) B
 A) C₆H₁₄. B) C₅H₁₂ C) C₅H₁₀. D) C₆H₆.
C_nH_{2n+2}

4) The unique aspect of a saturated hydrocarbon is that it must contain 4) A
 A) only single bonds. B) only carbon and hydrogen.
 C) single, double and triple bonds. D) single and double bonds.
test bank typo

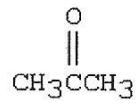
5) Carbon is almost always (valent means - number of bonds attached to C) 5) C
 A) trivalent. B) monovalent. C) tetravalent. D) divalent.

6) In representing the general formula of various functional groups, the symbol R stands for 6) C
 A) an aromatic group. B) a halogen atom.
 C) an alkyl group. D) a ring.

7) What is the name of the compound with a formula CH₃CH₂CH₂CH₃? 7) B
 A) methane B) butane C) propane D) ethane

8) Monomers 8) C
 A) are small polymers. B) cannot form polymers.
 C) are small building blocks of polymers. D) are ethylene.

9) The compound below is a(n) 9) A

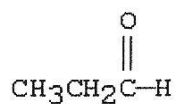


A) ketone. B) alcohol. C) aldehyde. D) carboxylic acid.

10) Alkanes are often called 10) D
 A) saturated fats. B) unsaturated hydrocarbons.
 C) carbohydrates. D) saturated hydrocarbons.

11) The compound below is a(n)

11) C



A) carboxylic acid.

B) ketone.

C) aldehyde.

D) alcohol.

12) A compound that contains only carbon and hydrogen is a(n)

12) D

A) carbohydrate.

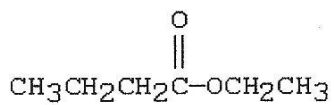
B) alcohol.

C) homolog.

D) hydrocarbon.

13) The compound below is classified as a(n)

13) A



A) ester.

B) carboxylic acid.

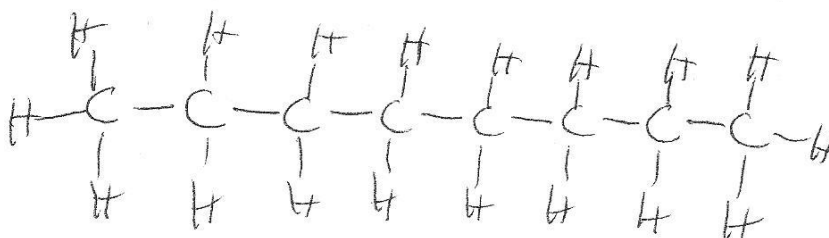
C) aldehyde.

D) ketone.

Part 2: Short Answer Please show work on all questions for partial and full credit. (40 pts)

1. For the alkane given as a **condensed structural formula** ($\text{CH}_3 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_2 \text{CH}_3$) give (12 pts, 6 pts each)

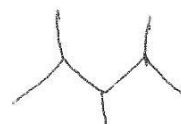
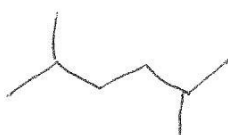
(a) **Structural formula**



(b) **Skeletal (or line bond) formula**

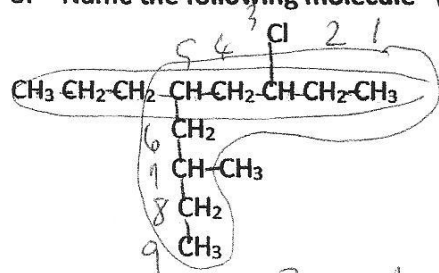


2. Give 2 structural isomers of the following molecule. (8 carbon alkane) (12 pts, 6 pts each)



+ many more

3. Name the following molecule (10 pts)



3-chloro-2-methyl-5-propyl nonane

3-chloro-2-methyl

3-chloro-2-methyl-5-propyl nonane

4. If you did the following reaction which would be your product? circle one best answer (6 pts)

