

EXAM PRACTICE QUESTIONS

Name _____

ID # _____

Multiple choice score _____ / 50 points

Short answer score _____ / 50 points

Total Score _____ / 100 points

*On the day of the exam: Wait outside the room until invited in.

*The exam is closed book

*Fill in the correct multiple choice answers (#1-10) on the attached scantron sheet.

*Fill in the answers to the short answer questions (#11-20) in the boxes on the first SHEET (pages 1+2).

11.



13.



12.



14.



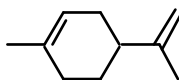
EXAM PRACTICE QUESTIONS

Multiple choice questions (#1-10, 5 points each): On the scantron, circle the letter / number for the **best answer** to each question.

1. What is the hybridization of the carbon atom in HCN (a linear molecule)?

- a) sp^3 b) sp^2 c) sp d) it is not hybridized

2. What is the molecular formula for limonene?

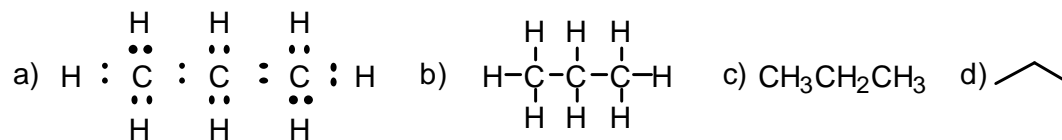


- a) $C_{10}H_{16}$
 b) $C_{10}H_{18}$
 c) C_9H_{12}
 d) C_9H_{13}

3. Which of the following elements is the least electronegative?

- a) F b) N c) O d) B

4. Which one of the following is the line-angle structure of propane?



5. Which one of the following has a dipole moment of zero ($\mu = 0$)?

- a) $\text{H}_2\text{C} = \text{CH}_2$ b) CHCl_3 c) CH_2Cl_2 d) $\text{H}_2\text{C} = \text{Cl}_2$

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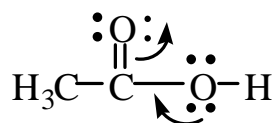
Short answer questions (#11-20, 5 points each): Write or draw each answer in the boxes provided on the answer sheet (pages 1 and 2).

11. Draw the MOST STABLE conformation of *trans*-1,4-dimethylcyclohexane.

12. Draw the highest energy ECLIPSED conformation for butane.

13. Draw a Lewis structure for methylamine (CH₃NH₂).

14. Draw a resonance arrow. Show the structure that results when electrons are moved as indicated; show formal charges where necessary.



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TRANSFER ALL ANSWERS TO THE FIRST SHEET.