



**CHEM-120 INTRO TO GENERAL, ORGANIC &
BIOLOGICAL CHEMISTRY WITH LAB YEAR ONE
LATEST VERSION 3 100 QUESTIONS AND ANSWERS
GUARANTEED PASS ALREADY GRADED A PLUS 2024-
2025**

1. What type of hybridization is found in the carbon atoms of ethene (C₂H₄)?


- A) sp³
 -  B) sp²
 - C) sp
 - D) dsp²
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2. Which intermolecular force is dominant in water (H₂O) molecules?


- A) London dispersion forces
 - B) Dipole-dipole interactions
 -  C) Hydrogen bonding
 - D) Ion-dipole interactions
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3. What is the pH of a 0.01 M HCl solution?


- A) 1
- B) 3

-  C) 2
 - D) 4
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4. In Benedict's test for reducing sugars, the copper ion changes from Cu^{2+} to:

- A) Cu
 - B) Cu^{3+}
 -  C) Cu^{+}
 - D) CuO
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5. Which functional group is present in an ester?

- A) -OH
 - B) -COOH
 -  C) -COO-
 - D) -NH₂
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6. Which enzyme catalyzes the breakdown of hydrogen peroxide into water and oxygen?

- A) Amylase
-  B) Catalase
- C) Lipase
- D) Protease


7. What is the major product when 2-methylpropene undergoes hydrohalogenation with HBr?

- A) 1-bromo-2-methylpropane
-  B) 2-bromo-2-methylpropane
- C) 1-bromo-3-methylpropane
- D) 2-bromo-1-methylpropene


8. What is the electron configuration of the nitrogen atom in its ground state?

- A) $1s^2 2s^2 2p^4$
-  B) $1s^2 2s^2 2p^3$
- C) $1s^2 2s^1 2p^4$
- D) $1s^2 2s^3 2p^2$


9. Which amino acid has a nonpolar side chain?

- A) Glutamic acid
 - B) Lysine
 -  C) Leucine
 - D) Serine
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10. What is the oxidation state of sulfur in sulfuric acid (H₂SO₄)?

- A) +2
 - B) 0
 -  C) +6
 - D) -2
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11. The formation of peptide bonds involves a reaction between:

- A) A thiol and a hydroxyl group
 -  B) An amino group and a carboxyl group
 - C) Two carboxyl groups
 - D) Two amino groups
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12. Which carbohydrate is a reducing sugar?

- A) Sucrose
 - B) Cellulose
 -  C) Glucose
 - D) Starch
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13. What is the IUPAC name for CH₃-CH₂-OH?

- A) Methanol