

CUET 2025 June 3 Chemistry Question Paper

Time Allowed :1 Hours	Maximum Marks :250	Total questions :50
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. The test is of 1 hour duration.
2. The question paper consists of 50 questions. The maximum marks are 250.
3. 5 marks are awarded for every correct answer, and 1 mark is deducted for every wrong answer.

1. The wavelength of the first line in the Balmer series of hydrogen spectrum is 656 nm.

What is the wavelength of the second line?

- (1) 486 nm
 - (2) 434 nm
 - (3) 397 nm
 - (4) 410 nm
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2. Which of the following molecules has the highest bond angle?

- (1) CH₄
 - (2) NH₃
 - (3) H₂O
 - (4) BF₃
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3. Which of the following gases will deviate most from ideal behavior at high pressure?

- (1) Hydrogen
 - (2) Helium
 - (3) Carbon dioxide
 - (4) Neon
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4. For a spontaneous process at constant temperature and pressure, which of the following is true?

- (1) $\Delta G > 0$
 - (2) $\Delta H > 0$
 - (3) $\Delta G < 0$
 - (4) $\Delta S < 0$
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5. For a first-order reaction, the time required to reduce the concentration of the reactant to one-fourth of its initial value is 20 minutes. What is the half-life of the reaction?

- (1) 5 min
 - (2) 10 min
 - (3) 20 min
 - (4) 40 min
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6. In an electrochemical cell, the standard electrode potential of Zn^{2+}/Zn is -0.76 V and that of Cu^{2+}/Cu is $+0.34\text{ V}$. What is the standard EMF of the cell?

- (1) 1.10 V
 - (2) -1.10 V
 - (3) 0.42 V
 - (4) -0.42 V
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7. Which of the following is used as a catalyst in the Haber process?

- (1) Iron oxide
 - (2) Vanadium oxide
 - (3) Manganese dioxide
 - (4) Platinum
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8. Which of the following compounds contains a carbonyl group?

- (1) Alcohol
 - (2) Aldehyde
 - (3) Amine
 - (4) Ether
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9. The coordination number of the central metal ion in $[\text{Fe}(\text{CN})_6]^{4-}$ is:

- (1) 4
 - (2) 6
 - (3) 2
 - (4) 3
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10. Which of the following is a polysaccharide?

- (1) Glucose
 - (2) Sucrose
 - (3) Cellulose
 - (4) Fructose
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