

Mizoram Board Class 12, 2026 Chemistry Question Paper

Time Allowed :3 Hours

Maximum Marks :100

Total questions :38

General Instructions

Read the following instructions very carefully and strictly follow them:

1. The paper is divided into two sections – Section A (Compulsory) and Section B (Elective).
2. Section A is compulsory for all candidates and generally includes objective-type questions, short answer questions, and long answer questions from the prescribed syllabus.
3. In Section A, candidates are required to answer all questions. The questions will cover topics from ancient, medieval, and modern history as prescribed by the syllabus.
4. Section B consists of elective questions. Candidates are required to attempt questions from the chosen topic according to the provided options.
5. The questions in Section A will be in the form of multiple-choice, short answer, and essay-type questions.
6. Answers to all questions must be written in neat and legible handwriting. Candidates must adhere strictly to the word limit mentioned in the questions.
7. Use of unfair means or electronic devices during the examination is strictly prohibited.
8. Candidates must ensure that they write their answers in the correct format, following the instructions given for each section.

1. An organic compound which can be distinguished by using sodium bicarbonate is

- (A) Alcohols
 - (B) Aldehydes
 - (C) Phenols
 - (D) Carboxylic Acids
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2. Which of the following organic compound will give a positive carbylamine test?

- (A) N-methylaniline
 - (B) N-methyl-o-methylaniline
 - (C) N,N-dimethylaniline
 - (D) 2,4-Dimethylaniline
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3. The IUPAC name of $(CH_3CH_2)_3N$ is

- (A) Hexan-1-amine
 - (B) Triethylethanamine
 - (C) N-ethylethanamine
 - (D) N,N-diethylethanamine
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4. Which of the following ions has paramagnetic character?

- (A) Cu^+
 - (B) Sc^{3+}
 - (C) Ni^{2+}
 - (D) Ti^{4+}
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5. The boiling point of a solvent containing non-volatile solute

- (A) is depressed
- (B) is elevated
- (C) does not change
- (D) none of the above

6. Which of the following concentration term does not change with temperature?

- (A) Molarity
 - (B) Molality
 - (C) Normality
 - (D) Formality
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7. If the rate of reaction between A and B is expressed as $k[A][B]^2$, the reaction is

- (A) first order in A
 - (B) second order in B
 - (C) overall having third order
 - (D) all are correct
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9. Given $E^0(\text{Ni}^{2+}/\text{Ni})$ and $E^0(\text{Cu}^{2+}/\text{Cu})$ are -0.2205 V and 0.34 V respectively. The potential for the cell $\text{Ni}/\text{Ni}^{2+}(0.01\text{ M})\|\text{Cu}^{2+}(0.1\text{ M})/\text{Cu}$ is

- (A) 0.59
 - (B) -0.59
 - (C) 0.95
 - (D) -0.95
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9. The number of phases in a colloidal system is

- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
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10. The transition temperature between α -sulphur and β -sulphur is

- (A) 269K
 - (B) 296K
 - (C) 369K
 - (D) 396K
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11. Which of the following ions does not give coloured solution?

- (A) Fe^{2+}
 - (B) Zn^{2+}
 - (C) Cr^{2+}
 - (D) Mn^{2+}
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12. Why are phenols more acidic than alcohols ?

13. Write notes on Friedel Craft Alkylation reaction with suitable chemical reaction.

14. Define Rosenmund reduction with suitable chemical reaction.

15. Write the correct chemical reaction for the conversion of Aniline to benzoic acid.

16. With the help of valence bond theory, predict the hybridization state, magnetic character and geometry of the complex $[\text{Co}(\text{NH}_3)_6]^{3+}$.
