

UP Board Class 12 Chemistry Question Paper 2026 Memory Based

Time Allowed :3 Hours	Maximum Marks :70	Total Questions :30
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General Instructions

1. Please check that this question paper contains 23 printed pages.
2. Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
3. Please check that this question paper contains 37 questions.
4. 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.

1. If the rate law of a reaction is $\text{Rate} = K[A]^2[B]^0$, then what will be the order of the reaction?

- (i) Zero order
 - (ii) First order
 - (iii) Second order
 - (iv) Third order
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2. For which of the following ions will the magnetic moment (μ) be maximum?

- (i) Zn^{2+}
 - (ii) Fe^{2+}
 - (iii) Co^{2+}
 - (iv) Ni^{2+}
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3. The increasing order of reactivity of the following compounds in S_N1 reaction is:

Compounds:

- A. $(CH_3)_3CBr$
- B. $CH_3CH_2CH_2CH_2Br$
- C. $(CH_3)_2CHCH_2Br$
- D. $CH_3CH(Br)CH_2CH_3$

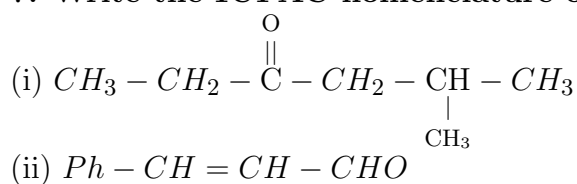
- (i) $A < B < C < D$
 - (ii) $B < C < D < A$
 - (iii) $D < C < B < A$
 - (iv) $B < D < A < C$
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4. Does the half-life of a first-order reaction depend on the initial concentration of the reaction? Explain.

5. Write the definition of electrode potential and cell electromotive force (emf).

6. $[NiCl_4]^{2-}$ is paramagnetic while $[Ni(CO)_4]$ is diamagnetic even though both are tetrahedral. Why?

7. Write the IUPAC nomenclature of the following organic compounds:



8. Write the mechanism of bimolecular nucleophilic substitution reaction (S_N2) of alkyl halide.

9. What is a peptide bond? Explain with an example.

10. (i) Write the electronic configuration of the element with atomic number 24.
(ii) Find the number of unpaired electrons in Co^{2+} ion.
(iii) Why is the range of oxidation states greater in the actinoid series compared to the lanthanoid series?

11. What happens when aniline reacts with the following:

- (i) Bromine water
(ii) $(CH_3CO)_2O$ / Pyridine
(iii) $HNO_2 + HCl(0^\circ - 5^\circ C)$
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12. Write the structures of (A), (B), and (C) in the following reaction:
Reaction Scheme:



13. Write the structures of (A), (B), and (C) in the following reaction:

