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JEE (MAIN) 2026

MEMORY BASED QUESTIONS & TEXT SOLUTION

SHIFT-2

DATE & DAY: 24 January 2026 & Saturday

PAPER-1

Duration: 3 Hrs.

Time: 03:00 PM – 06:00 PM

SUBJECT: CHEMISTRY

Selections in JEE (Advanced)/
IIT-JEE Since 2002

52979

Classroom: 35901 | Distance: 17078

Selections in JEE (Main)/
AIEEE Since 2009

262693

Classroom: 194471 | Distance: 68222

Selections in NEET (UG)/
AIPMT/AIIMS Since 2012

22733

Classroom: 15409 | Distance: 7324

Admission Open for 2026-27

Target: JEE (Advanced) | JEE (Main) | NEET (UG) | PCCP (Class V to X)

100% Scholarship on the basis of Class 10th, 12th
& JEE (Main) 2026 %ile / AIR

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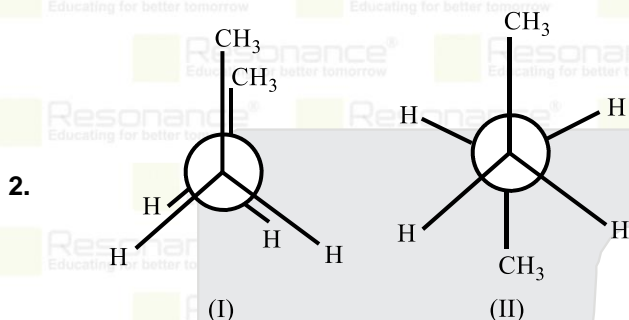
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PART : CHEMISTRY

1. Correct order of 2nd Ionization enthalpy?
(1) $C < N < O < F$ (2) $O < C < N < F$ (3) $C < O < N < F$ (4) $C < N < F < O$

Ans. (3)



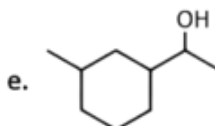
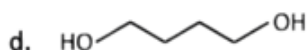
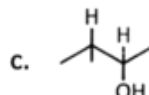
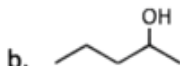
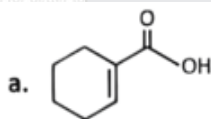
Statement I: II is more stable than I.

Statement II: As dihedral angle increases, stability decreases

- (1) Both statement I and statement II are correct
(2) Both statement I and statement II are incorrect
(3) Statement I is correct but statement II is incorrect
(4) Statement I is incorrect but statement II is correct

Ans. (3)

3. Which of the following molecules is secondary alcohol?



- (1) b, c, d, e only (2) b, c, e only (3) a, c, d, e only (4) a, b, d only

Ans. (2)

4. How many linear tripeptides are possible with valine (Val), Glycine (Gly) and Alanine (Ala). No amino acid should be repeated?

- (1) 8 (2) 5 (3) 6 (4) 4

Ans. (3)

5. An electron make transition from higher energy orbit (n_2) to lower energy orbit (n_1) in Li^{2+} ion such that $n_1 + n_2 = 4$ & $n_2 - n_1 = 2$. Determine the wavelength emitted in the dimension (in nm)

- (1) 9.2 nm (2) 11.4 nm (3) 16.7 nm (4) 12.9 nm

Ans. (2)

6. (A) $[Co(CN)_6]^{3-}$ (B) $[Co(NH_3)_5H_2O]^{3+}$ (C) $[Co(NH_3)_6]^{3+}$ (D) $[CoF_6]^{3-}$

The wavelength absorbed by the above complexes in the order

- (1) $A > B > C > D$ (2) $A < C < B < D$ (3) $B < A < C < D$ (4) $C > A > B > D$

Ans. (2)

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7. Which of the following have same bond order and are paramagnetic?

- (1) O_2^+, N_2^- (2) O_2^-, N_2^- (3) O_2^-, N_2^+ (4) O_2^+, O_2^-

Ans. (1)

8. Given:

$$\Delta H_{\text{atom}}(\text{CH}_4) = x \text{ kJ mole}^{-1}$$

$$\Delta H_{\text{atom}}(\text{C}_2\text{H}_6) = y \text{ kJ mole}^{-1}$$

Find out bond energy (C - C) (kJ/ mole).

- (1) $y - 2x$ (2) $y - \frac{3x}{2}$ (3) $y - 4x$ (4) $y - x$

Ans. (2)

9. 0.18 M HQ solution has molar conductivity $\frac{1}{30}$ times the molar conductivity of 0.02

M HZ solution. Find the value of $\text{pK}_a(\text{HQ}) - \text{pK}_a(\text{HZ})$.

[Given that α is very less than 1]

Assume that $\lambda_m^\infty(Q^-) = \lambda_m^\infty(Z^-)$

Ans. (2)

10. A complex $\text{Cr}(\text{H}_2\text{O})_6\text{Cl}_3$ show conductance similar to 1 : 2 electrolyte in aq. Solution. 9.3 g of this complex is passed through a cation exchange then excess AgNO_3 is added. Find mass of AgCl precipitated in gram? [Molar mass of Cr = 52 g/mol.]

Ans. (11)

11. A group VII element which has a +7 oxidation state forms a salt with potassium (K). What is the colour of this salt?

- (1) Green (2) Yellow (3) Orange (4) Purple

Ans. (4)

12. Vapour pressures of two volatile species A and B are 55 mm and 120 mm respectively. If mole fraction of 'A' in liquid state is 0.8, then mole fraction of 'B' in vapour state is

- (1) 0.65 (2) 0.45 (3) 0.35 (4) 0.53

Ans. (3)

13. The half-life of radioactive Zn^{65} is 245 days. Find time after which the activity remains 75% ?

Ans. (102)

14. How would you distinguish between products P and Q formed in the below reaction



- (1) Fehling solution test (2) Lucas test
(3) 2, 4 DNP test (4) Iodoform test

Ans. (4)

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15. **Statement-I** : RMgX react with CO_2 followed by acidification form product, which reacts with NH_3/Δ then reacts with NaOCl form product which further reacts with $\text{CHCl}_3/\text{NaOH}$ and final product is $\text{R}-\text{N}\equiv\text{C}$.

Statement-II : $\text{R}-\text{N}\equiv\text{C}$ on hydrolysis gives RCOOH .

Which amongs the following statement is correct.

- (1) Statement-I and Statement-II both are correct
- (2) Statement-I is incorrect Statement-II is correct
- (3) Statement-I is correct Statement-II is incorrect
- (4) Statement-I and Statement-II both incorrect

Ans. (3)

16. **Statement (I)** : Two Different Aldehyde on cross aldol condensation always gives four Product.

Statement (II) : Among benzaldehyde and Acetophenone only acetophenone react with semicarbazide.

- (1) Statement-I and Statement-II both are correct.
- (2) Statement-I and Statement-II both are incorrect.
- (3) Statement-I is correct but Statement-II is incorrect.
- (4) Statement-I is incorrect but Statement-II is correct.

Ans. (2)

17. Aniline (9.3 gm) on reaction with acetic anhydride forms 'X' (11 gm), find the percentage yield of the reaction:

- (1) 80
- (2) 90
- (3) 81.48
- (4) 93.2

Ans. (3)

18. Find incorrect statement among the following

- (1) C^{13} is a radioactive isotope
- (2) Covalency of carbon greater than 4 is possible
- (3) Carbon can exhibit +2 & +4 oxidation state
- (4) In group-14, CO_2 is most acidic

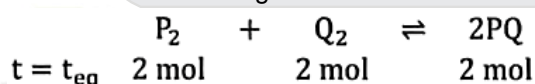
Ans. (2)

19. Which of the following statement is correct about resonance and resonance structures?

- (1) Stability of resonance hybrid decreases with increase in number of equivalent resonance structures
- (2) Electronegative atom bearing positive charge is a more stable resonance structure
- (3) Resonance structure with more number of covalent bonds is more stable
- (4) Resonance structures differ in position of electrons and relative position of atoms

Ans. (1)

20. Consider the following reversible reaction wherein the moles of species at equilibrium is given



If one mole of P_2 and one mole of Q_2 are added at equilibrium. The number of moles of P_2 , Q_2 and PQ at new equilibrium, respectively are

- (1) $\frac{8}{3}, \frac{8}{3}, \frac{4}{3}$
- (2) $\frac{4}{3}, \frac{4}{3}, \frac{4}{3}$
- (3) $\frac{4}{3}, \frac{4}{3}, \frac{8}{3}$
- (4) $\frac{8}{3}, \frac{8}{3}, \frac{8}{3}$

Ans. (4)

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