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# JEE (MAIN) 2026

MEMORY BASED QUESTIONS & TEXT SOLUTION

SHIFT-1

**DATE & DAY:** 24 January 2026 & Saturday

**PAPER-1**

**Duration:** 3 Hrs.  
**Time:** 09:00 – 12:00 IST

**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

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& JEE (Main) 2026 %ile / AIR

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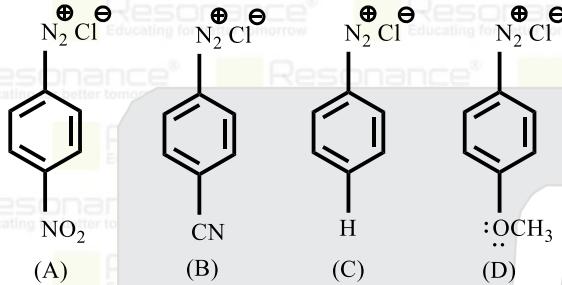
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This Solution was download from Resonance JEE (Main) 2026 Solution Portal

**PART : CHEMISTRY**

**Atomic masses :** [H = 1, D = 2, Li = 7, C = 12, N = 14, O = 16, F = 19, Na = 23, Mg = 24, Al = 27, Si = 28, P = 31, S = 32, Cl = 35.5, K = 39, Ca = 40, Cr = 52, Mn = 55, Fe = 56, Cu = 63.5, Zn = 65, As = 75, Br = 80, Ag = 108, I = 127, Ba = 137, Hg = 200, Pb = 207]

**1. Compare order of stability :**

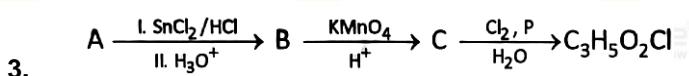
(1) A < B < C < D  
 (3) C < D < A < B  
 (2) B < A < C < D  
 (4) D < A < B < C

**Ans. (1)****2. Match List-I with List-II.**

	<b>List-I</b>		<b>List-II</b>
A.	Vinyl halide	(I)	
B.	Allyl halide	(II)	
C.	Benzyl halide	(III)	
D.	Aryl halide	(IV)	

Select the correct option.

(1) A(II), B(I), C(III), D(IV)  
 (3) A(I), B(II), C(IV), D(III)  
 (2) A(I), B(II), C(III), D(IV)  
 (4) A(II), B(I), C(IV), D(III)

**Ans. (2)**

Final product has one chiral centre. Structure of A is

**Ans. (1)****Resonance Eduventures Ltd.**

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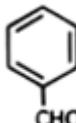
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4. Which of following compound contains 3 unpaired electrons?

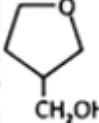
(1)  $V_2O_5$  (2)  $[TiF_6]^{3-}$  (3)  $[CoF_6]^{4-}$  (4)  $[Fe(CN)_6]^{3-}$

Ans. (3)

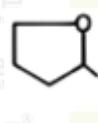
5. Which of the following compounds with give positive Tollen's reagent test?



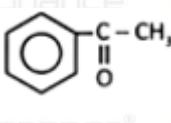
(A)



(B)



(C)



(D)

(1) A, B and C only  
(3) A, C and D only

(2) A and C only  
(4) B, C and D only

Ans. (2)

6. Two solutes A and B of 0.3 g and 0.9 g respectively (molar mass of A and B are 30 g/mol and 90 g/mol respectively. Calculate of osmotic pressure at 300 K (in atm) in 100 ml of solution

Ans. (5)

7.  $K_2Cr_2O_7 + I^- + H^+ \rightarrow I_2$  (x = number of moles of  $e^-$  exchanged per mol  $I_2$ )  $K_2Cr_2O_7 + S^{2-} \rightarrow S$  (y = number of moles of  $e^-$  exchanged for mole of S)  $x + y$  is

(1) 12 (2) 9 (3) 4 (4) 6

Ans. (3)

8. Match the column

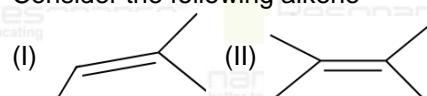
	Column-I		Column-II
(A)	$IF_3$	(I)	$sp^3 d^3$ , Pentagonal bipyramidal
(B)	$IF_5$	(II)	$sp^3 d^3$ , T-shaped
(C)	$IF_7$	(III)	$sp^3$ , Tetrahedral
(D)	$ClO_4^-$	(IV)	$sp^3 d^2$ , Square pyramidal

(1) (A)-(I); (B)-(II); (C)-(III); (D)-(IV)  
(3) (A)-(II); (B)-(IV); (C)-(I); (D)-(III)

(2) (A)-(II); (B)-(I); (C)-(IV); (D)-(III)  
(4) (A)-(II); (B)-(III); (C)-(IV); (D)-(I)

Ans. (3)

9. Consider the following alkene



The correct stability order of alkenes is

(1) II > I > III > IV (2) I > II > III > IV

(3) IV > I > III > II (4) III > I > II > IV

Ans. (1)

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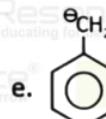
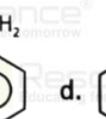
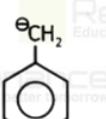
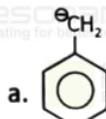
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10. The correct order of stability of following species is

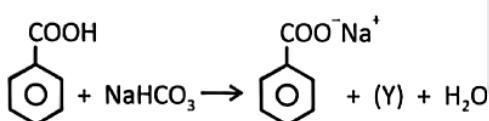
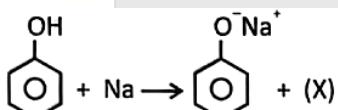


(1) e > c > a > b > d  
(3) e > a > c > b > d

(2) d > c > b > a > e  
(4) e > a > b > c > d

Ans. (1)

11. What is the sum of molar mass of X and Y formed in the given reactions?



(1) 46

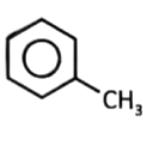
(2) 44

(3) 2

(4) 42

Ans. (1)

12. Consider the following molecules.



The correct order of dipole moment is

(1) A > B > C      (2) A > C > B

(3) B > A > C

(4) C > A > B

Ans. (1)

13. Given below are two statements.

**Statement I:** Atomic radius is always more than ionic radius.

**Statement II:** The correct order of metallic character is K > Mg > Al > B

In the light of above statements, choose the correct option.

(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. (4)

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14. Match the following.

	Column-I		Column-II
A.	Free expansion	(I)	$W = -P_{ex} \Delta V$
B.	Reversible isothermal	(II)	$W = nC_v dT$
C.	Irreversible isothermal	(III)	$W = 0$
D.	Adiabatic reversible	(IV)	$W = -nRT \ln \frac{V_f}{V_i}$

(1) A(I), B(IV), C(III), D(II)

(2) A(III), B(IV), C(I), D(II)

(3) A(IV), B(III), C(II), D(I)

(4) A(II), B(I), C(III), D(IV)

Ans. (2)

15. Non-volatile solute A of mass 0.3 g (Molecular mass = 60), and non-volatile solute B of mass 0.9 g (Molecular mass = 180) in 100 mL H<sub>2</sub>O at 27°C. If K<sub>b</sub> = 0.52 K · Kg° · mol<sup>-1</sup>, then elevation of boiling point is

(1) 0.52 K

(2) 0.052 K

(3) 0.026 K

(4) 0.083 K

Ans. (1)

16. A solution contains two group-IV cations, X<sup>2+</sup> and Y<sup>2+</sup>, each at an initial concentration of 0.1M. H<sub>2</sub>S gas is passed through the solution to form a saturated solution.

Given K<sub>sp</sub> of YS = 2 × 10<sup>-27</sup> M<sup>2</sup> K<sub>sp</sub> of XS = 1 × 10<sup>-27</sup> M<sup>2</sup>What is the minimum concentration of sulphide in [S<sup>2-</sup>] required to begin precipitation of YS?(1) 2 × 10<sup>-26</sup>(2) 10<sup>-26</sup>(3) 3.2 × 10<sup>-14</sup>

(4) 0.1

Ans. (1)

17. What is the hybridisation and spin only magnetic moment of complex [Co(CO)<sub>6</sub>]Cl<sub>3</sub>?

(1) d<sup>2</sup>sp<sup>3</sup>, 0BM(2) sp<sup>3</sup>d<sup>2</sup>, 4.90BM(3) d<sup>2</sup>sp<sup>3</sup>, 4.90BM(4) sp<sup>3</sup>d<sup>2</sup>, 0 BM

Ans. (1)

18. Minimum energy transition of Balmer series (energy line having minimum energy) of H-atom has energy of L eV. If the value of minimum energy of Lyman series (energy line having minimum energy) of H-atom in terms of L is y, then the value of 10 y is \_\_\_\_.

Ans. (54)

19. Find % of 'N' in 0.5 g organic compound which gives 34 mL N<sub>2</sub>(g) at 715 mm Hg pressure and 300 K Aq. tension = 15 mmHg

(Report to nearest integer)  $R = 0.0821 \frac{\text{Lit} - \text{atm}}{\text{K} - \text{mol}}$ 

Ans. (7)

20. Find the value of  $\log \left( \frac{K_{\text{catalyst}}}{K_{\text{uncatalyst}}} \right)$  at 300K. If the change in activation energy ( $\Delta$ ) is -10 kJ/mol.

(R = 8 JK<sup>-1</sup> mol<sup>-1</sup>) (ln x = 2.31 log x)

Ans. (2)

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