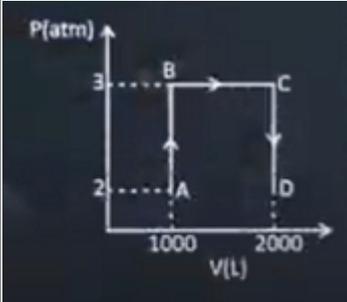
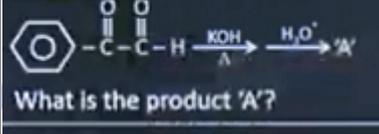
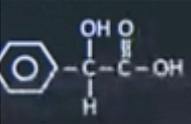
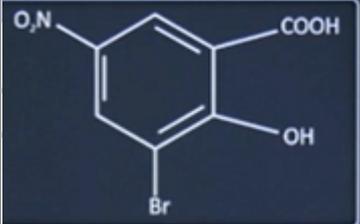
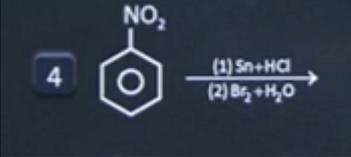
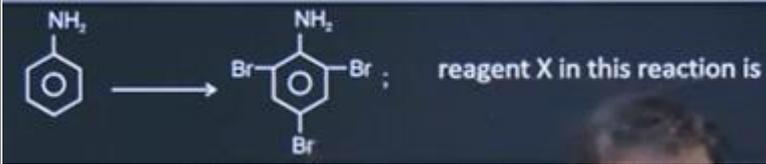
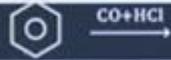
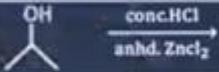
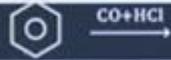
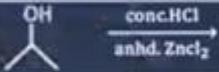
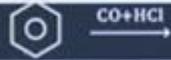
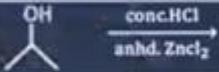


### 3 April Shift 2 Chemistry JEE Main Question Paper 2025

Q.No.	Question	Answers
1	Find out magnitude of work done in the process ABCD (in kJ) (1 atm. Lit = 101.3 J) 	304
2	Amount of magnesium (Mg) (in mg) required to liberate 224 mL of H <sub>2</sub> gas at STP, when reacted with HCl.	240
3	Among Sc, Ti, Mn and Co, Calculate the spin only magnetic moment in oxidation state of metal having highest heat of atomisation.	3
4	Consider the following reaction.  What is the product 'A'?	
5	The correct IUPAC Name of the given compound is: 	3-Bromo-2-Hydroxy-5-nitrobenzoic acid
6	At 715 mm pressure, 300 K, volume of N <sub>2</sub> (g) evolved was 80 mL by a 0.4 g sample of organic compound. Find % of N in organic compound 4. tension at 300 K = 15 mm	20.95
7	Which of the following reagent is used to prepare tribromoaniline ?	

8	<p>Match the following list-I with list-II :</p> <table border="0"> <tr> <td><b>List-I (Groups)</b></td> <td><b>List-II (Elements)</b></td> </tr> <tr> <td>(A) Pnictogens</td> <td>(I) Rn</td> </tr> <tr> <td>(B) Chalcogens</td> <td>(II) At</td> </tr> <tr> <td>(C) Halogens</td> <td>(III) Te</td> </tr> <tr> <td>(D) Noble gases</td> <td>(IV) Bi</td> </tr> </table>	<b>List-I (Groups)</b>	<b>List-II (Elements)</b>	(A) Pnictogens	(I) Rn	(B) Chalcogens	(II) At	(C) Halogens	(III) Te	(D) Noble gases	(IV) Bi	A IV B III C III D I										
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9	Find orbital angular momentum for 2s and 2p energy levels	$0, \frac{h}{\sqrt{2}\pi}$																				
10	Which of the following order is correct? (A) Electronegativity : B > TI > In > Ga > Al (B) Ionisation energy : B > TI > Ga > Al > In (C) Density: TI > In > Ga > Al > B (D) Size: B > Al > Ga > In > Al	(A, B, C) only																				
11		Br <sub>2</sub> /H <sub>2</sub> O																				
12	Which of the following vitamins are fat-soluble? B <sub>12</sub> , C, D, B, E	D and E																				
13	Statement-I : CrO <sub>3</sub> is a strong oxidising agent Statement-II: Cr <sup>+6</sup> is more stable than Mo <sup>+6</sup> considering the above statements, choose the correct option.	Both Statement I is correct but Stataemnt II is incorrect																				
14	Which of the following compound or complex ions is/are diamagnetic in nature? (a) CrO <sub>3</sub> (b) [Fe(CN) <sub>6</sub> ] <sup>4-</sup> (c) [Co(H <sub>2</sub> O) <sub>3</sub> ,F <sub>3</sub> ] (d) [Cr(NH <sub>3</sub> ) <sub>6</sub> ] <sup>3+</sup>	a, b and c only																				
15	20 mL 1M NaOH is mixed with 10 mL 2M HCl which is further diluted to 100 mL. Find concentration of final solution?	0.2 M																				
16	Which of the following statement is correct w.r.t. Arrhenius equation?	Dimension of K and A are same																				
17	<p>Match the Column-I with Column-II and Choose the correct option</p> <table border="1"> <thead> <tr> <th></th> <th>Column-I</th> <th></th> <th>Column-II</th> </tr> </thead> <tbody> <tr> <td>(P)</td> <td>Finkelstein reaction</td> <td>(1)</td> <td></td> </tr> <tr> <td>(Q)</td> <td>Lucas test</td> <td>(2)</td> <td><math>R-X \xrightarrow[\text{Dry ether}]{Na}</math></td> </tr> <tr> <td>(R)</td> <td>Wurtz reaction</td> <td>(3)</td> <td></td> </tr> <tr> <td>(S)</td> <td>Gatterman Koch reaction</td> <td>(4)</td> <td><math>CH_3CH_2Cl \xrightarrow[\text{acetone}]{NaI} CH_3CH_2I</math></td> </tr> </tbody> </table>		Column-I		Column-II	(P)	Finkelstein reaction	(1)		(Q)	Lucas test	(2)	$R-X \xrightarrow[\text{Dry ether}]{Na}$	(R)	Wurtz reaction	(3)		(S)	Gatterman Koch reaction	(4)	$CH_3CH_2Cl \xrightarrow[\text{acetone}]{NaI} CH_3CH_2I$	P (4) Q (3) R (2) S (1)
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18	Statement-I: Wet cotton clothes made up of cellulose based carbohydrates take a comparatively longer time to get dried than wet Nylon based clothes. Statement-II: Both form intermolecular H-bonter molecules	Both statement-I and statement-II are correct
19	$C_9H_{12}$ is a derivative of benzene, how many total structural isomers of the compounds are possible.	4
20	'x' g of nitrobenzene gives 4.2 g 1, 3-dinitrobenzene with 100% yield. Find the value of	3.075