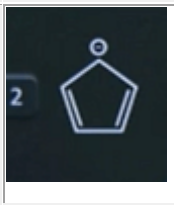
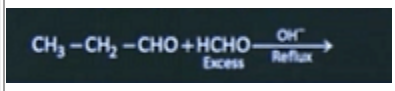
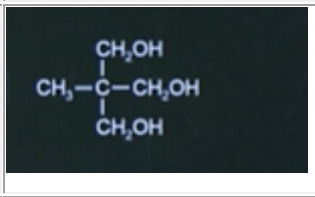
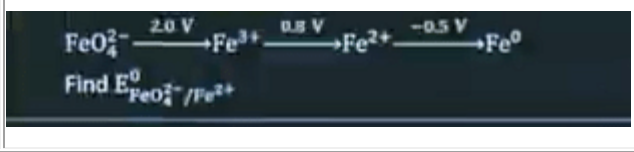
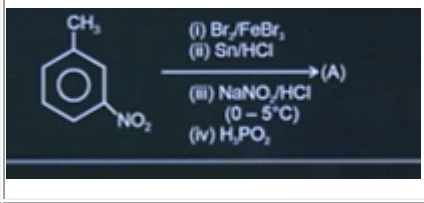
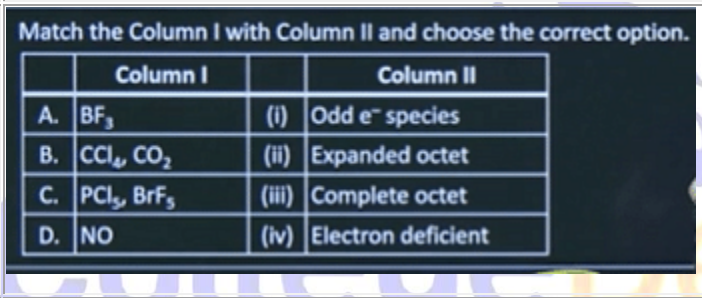
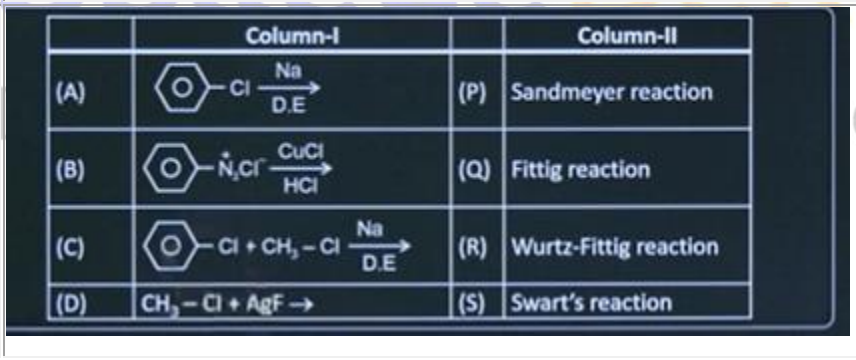
JEE MAIN 23 JANUARY 2025 SHIFT 1

CHEMISTRY QUESTION PAPER WITH ANSWER KEY

Q.No.	Questions	Answers
1.	Which of the following react with Hinsberg reagent?	A, C, D
2.	Among the following, the most carbanion is	
3.	Which of the following compound can show Fac-mer isomerism?	$[Co(NH_3)_3Cl_3]$
4.	Which of the following pair of ions are same coloured?	Cr^{2+}, Cu^{2+}
5.	Which of the following does not belong to the same period in the modern periodic table?	Pd
6.	If 2gm phenol is allowed to react with Br_2/H_2O. how much Br_2 will be required to produce 2, 4, 6 tribromophenol (rounded off to the nearest integer)	10
7.	If 10^{21} molecules are removed from x mg of CO_2(g), then 2.4 x 10-3 moles are left. Calculate the value of x.	179
8.	Identify the product formed in the following reaction. 	
9.	Incorrect statement among the following is	SO_2 act as an oxidising agent but not reducing agent
10.	Consider the following 	Nearest integer= 2

CollegeDekho.com
Discover • Prepare • Achieve

11.	Consider the given values: $\Delta H = 55 kJ\ mol^{-1}$ $\Delta S = 175\ J\ mol^{-1}\ K^{-1}$ T= 25 degree Celcius Calculate the value of Gibbs free energy charge (ΔG) in $J\ mol^{-1}$	2850
12.	In estimation of sulphur by Carius method, 160 gm of organic compound gives 466 gm of Barium Sulfate. % of sulphur in the organic compound is	40
13.	Consider the following sequence of reactions and find the molecular mass of the final product (A) formed in $g\ mol^{-1}$ 	171
14.		A (iv), B (iii), C (ii), D (i)
15.		A (Q), B (P), C (R), D (S)
16	CO^{2+} is forming an octahedral complex with spin spin-only magnetic moment 3.83 BM. Which of the following electronic configuration?	$t_{2g}^5\ eg^2$
17.	Given below are two statements: Statement I: During Lassaigne's test, covalent compound is converted to ionic compund Statement II: $Na_4[Fe(CN)_6]$ gives Prussian blue colour reaction with $Fe_2(SO_4)_3$	Both S-I and S-II are correct

18.	A (g)- 2B(g) For the given reaction initial pressure was 0.6 atm and rate constant is 4.606 x 10^{-2} $sec^{-1.}$ Find the pressure at 100 sec.	1.194 atm
19.	Consider the following statements and Choose the correct option. Statement I: Fructose does not contain aldehyde group but it gives Tollen's test. Statement II: In disaccharides, if the reducing groups are bonded, these are non reducing e.g sucrose. If these functional groups are free then they are reducing eg Maltose and Lactose.	Both S-I and S-II are correct
20.	For a sample of hydrogen atom, the wavelength observed is 656 nm during a transition. The transition and series of wavelength will be	3- 2, Balmer

CollegeDekho
Discover • Prepare • Achieve