

This question paper contains 3 printed pages.]

Your Roll No.

5103

B.Sc. (Prog.) / II

B

CH-201 – INORGANIC CHEMISTRY

(Admissions of 2008 onwards)

Time : 2 Hours

Maximum Marks : 50

(Write your Roll No. on the top immediately on receipt of this question paper.)

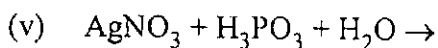
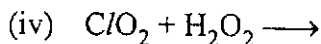
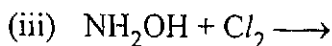
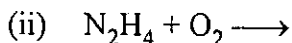
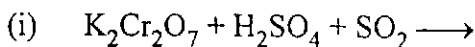
Attempt any **four** questions.

1. (a) With reference to the Ellingham diagrams discuss the slopes of the lines for the oxides of carbon and also discuss the versatility of carbon as a reducing agent when it forms CO gas. 4½
- (b) Describe Kroll's and Mond's processes. 4
- (c) Discuss bonding in diborane. 4

2. Write short notes on any **three** of the following :
 - (a) Silicates 4½

- (b) Borazine 4
- (c) Toxic effects of arsenic and mercury. 4
- (d) Allotropes of phosphorus. 4
3. (a) Giving reasons arrange the oxoacids of chlorine in the increasing order of their acidic strength. 4½
- (b) NH_3 is more basic than PH_3 . Comment. 4
- (c) Draw and discuss the structures of PCl_3 and PCl_5 , respectively. 4
4. (a) What is inert-pair effect ? How does it influence the chemical behaviour of the compounds ? 4
- (b) Discuss the mode of occurrence of metals on the basis of standard electrode potentials. 4½
- (c) SO_2 acts as a strong reducing agent in alkaline medium. Explain. 4

5. (a) Complete and balance the following equations : 2 × 5



- (b) Why is SnCl_2 a stronger reducing agent ? 2½

6. (a) Describe Na/K pump. 4½

- (b) Discuss the toxic effects of carbon monoxide and hydrogen sulphide gases. 4

- (c) "Stability of hydrides decreases down the gp". Explain. 4
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