

17314

11920

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.

Marks

1. (A) Attempt any SIX :

2 × 6 = 12

- (a) State raw material and catalyst use in manufacturing of sulphuric acid.
- (b) Write reaction involved in manufacturing of sulphuric acid.
- (c) State uses and properties of sulphuric acid.
- (d) Write down the advantages of V_2O_5 catalyst used in manufacture of sulphuric acid.
- (e) Why sulphur trioxide dissolved in concentrate sulphuric acid and not in water ?
- (f) Describe biurate and its chemical formula.
- (g) State Joule Thomson effect.
- (h) Write any four types of cement.

(B) Attempt any TWO :

2 × 4 = 8

- (a) Describe diaphragm cell with its diagram.
- (b) Describe manufacturing process of producer gas.
- (c) Explain hardening and setting of cement.

[1 of 4]

P.T.O.

2. Attempt any TWO :**2 × 8 = 16**

- (a) Describe manufacturing process of Ammonia with reaction and flow diagram.
- (b) Draw and describe manufacturing process of red phosphorous.
- (c) What is ammonical brine ? How it is produced in Solvay's process ? Explain in detail with diagram.

3. Attempt any FOUR :**4 × 4 = 16**

- (a) Explain manufacturing process of single superphosphate.
- (b) Write reaction involved in manufacturing process of phosphoric acid and its uses.
- (c) Differentiate between single superphosphate and triple superphosphate.
- (d) Explain manufacturing process of chlorine.
- (e) Draw and describe manufacturing process of hydrochloric acid.
- (f) State properties and uses of sodium hydroxide and chlorine.

4. Attempt any FOUR :**4 × 4 = 16**

- (a) State properties and uses of hydrochloric acid.
- (b) Draw the manufacturing process of phosphoric acid.
- (c) Describe manufacturing process of phosphorous trichloride.
- (d) What are advantages of mercury cells ?
- (e) Describe principle and manufacturing process of water gas.
- (f) Describe Claude's process in detail.

17314

[3 of 4]

5. Attempt any TWO :

2 × 8 = 16

- (a) Draw and describe manufacturing process of Urea.
- (b) Explain manufacturing process of carbon dioxide.
- (c) Explain manufacturing process of nitric acid and its reaction.

6. Attempt any FOUR :

4 × 4 = 16

- (a) Explain manufacturing of acetylene.
 - (b) Explain manufacturing process of portland cement by wet process.
 - (c) Describe manufacturing process of ammonium nitrate.
 - (d) Describe manufacturing process of hydrogen from Bosh process.
 - (e) Describe phosphorus pentachloride in detail.
 - (f) How will you control pollution in mixed fertilizer ?
-

