Printed Pages : 2

ECH-503

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 151504

Roll No.

B. Tech.

(SEM. V) (ODD SEM.) THEORY EXAMINATION, 2014-15

CHEMICAL TECHNOLOGY - II

Time : **2** Hours] [Total Marks : **50**

1 Attempt any FOUR parts : **3×4=12**

(a) Classify production methods of soda ash and explain any one.

(b) Discuss the major engineering problems in solvay process.

(c) Elaborate the production of phophorous.

(d) Explain the consumption pattern of urea.

(e) What are the uses of hydrochloric acid? Explain them in detail.

(f) Explain the production of biofertilizers.

2 Attempt any TWO parts : **6×2=12**

(a) With the help of a neat flow sheet explain the production of chlorine-caustic soda production by electrolytic process.

(b) Discuss the disadvantages of solvay process and explain modified solvay process.

(c) What are the various production methods of Hcl? Explain any one in detail.

3 Attempt any TWO parts : **7×2=14**

(a) Describe the contact process and explain engineering problems in it.

(b) Draw the flow sheet and explain the production of phosphoric acid from phosphate rock by strong acid process.

(c) What are the applications of super phosphate and discuss the production of triple super phosphate.

4 Attempt any TWO parts : **6×2=12**

(a) Classify the production processes of nitric acid and explain ammonia oxidation process and advantages of the process.

(b) Discuss the production of ammonium nitrate with a neat diagram and economics of the process.

(c) Discuss major engineering problems in syngas production and explain with a flow sheet the steam reforming process for synthesis gas.