B. Tech.
(SEM. VI) EXAMINATION, 2006-07
CHEMICAL TECHNOLOGY - II

Time : 2 Hours] 
[Total Marks : 50

Note : 
(1) Answer all questions.
(2) All questions carry equal marks
(3) In case of numerical problems assume data wherever not permitted.
(4) Be precise in your answer.

1 Attempt any four parts of the following : 4 × 4
(a) What are the basic conditions for high productivity and stable operation of ammonia plant?
(b) Compare the total recycle process and stripping process for urea production?
(c) Describe the electrolysis reactions in the production of caustic soda.
(d) Discuss the advantages and disadvantages of vanadium pentoxide catalyst used in contact process.
(e) What are the various impurities in rock phosphates and how are they removed?
(f) What are the probable impurities in Caustic Soda and how are they removed?
2 Attempt any two parts of the following. \[ 4.5 \times 2 = 20 \]

(a) Describe the manufacturing of Nitric acid by ammonia oxidation process. What are the chemical reactions involved?

(b) Explain in detail a process for obtaining SO\(_2\) from Pyrite ore required for sulfuric acid production.

(c) Describe with the neat flow diagram, the manufacture of Triple Super Phosphate from rock phosphate.

3 Attempt any two parts of the following. \[ 4.5 \times 2 \]

(a) Why the glasses are called as sub cooled liquid? Explain the manufacturing of Flat Glass by continuous process.

(b) Describe the manufacturing of Portland cement by wet process. Discuss the engineering problems involved during process.

(c) What are the various processes available for manufacturing Hydrogen Gas on commercial scale? Explain any one in detail.

4 Write short notes on any four of the following. \[ 4 \times 4 \]

(a) Varnish

(b) Pigment

(c) White Cement

(d) LPG

(e) Ceramics

(f) Mixed Fertilizers.