

Printed Pages : 3



ECH061

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

PAPER ID : 151855

Roll No.

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B.Tech

(SEM. VIII) THEORY EXAMINATION 2014-15
FERTILIZER TECHNOLOGY

Time : 3 Hours]

[Total Marks : 100

- Note: (1) Attempt **All** questions.
(2) Assume suitable data, if required.
(3) Be precise in your answer
(4) All questions carry equal marks

- 1 Attempt any **FOUR** parts of the following:- **5x4=20**
- Give the method of preparation of nitric acid.
 - Write short note on Micronutrient in agriculture.
 - Enumerate the fertilizer industries in India with their location and product details.
 - Write short note on preparation of triple superphosphate.
 - Write short note on 'Percentage of nitrogen in urea'.
 - Write short note on the types of fertilizers in India.

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[Contd...

- 2 Attempt any **TWO** parts of the following: - **10x2=20**
- (a) Describe the detail procedure for the manufacturing of Complex Fertilizers with suitable example.
 - (b) Define the term 'Abatement'. Also discuss the main polluting effluents, associated with fertilizer industries and their disposal.
 - (c) Define Mixed Fertilizers. Write short note on Haber's process for the production of ammonia.
- 3 Attempt any **TWO** parts of the following: - **10x2=20**
- (a) Discuss the term 'Instrumentation'. What is the role of computerized system to control the process of a fertilizer industry?
 - (b) Give the production procedure for superphosphate (SP) from phosphate rock, with the help of neat sketch.
 - (c) Give the complete process of manufacturing of urea with the help of a neat flow diagram and reactions involved.
- 4 Attempt any **TWO** parts of the following: - **10x2=20**
- (a) Explain the working principle of ammonia convertor with the help of neat diagram and its operating conditions.
 - (b) Describe the types of water used in the fertilizer industry. How will you prepare cooling water?

(c) Define the term 'Diversification'. Also give the detail plan for energy conservation in a fertilizer industry.

5 Write short notes on any FOUR of the following: **-5x4=20**

- (a) Bio fertilizers
- (b) Plant location
- (c) HBJ pipeline
- (d) CAN
- (e) NPK
- (f) DAP