

IV B.Tech I Semester Supplementary Examinations, April/May 2005
FERTILIZER TECHNOLOGY
(Chemical Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is Nitrogen cycle and explain how the atmospheric nitrogen is fixed to the soil.
(b) In what forms Nitrogen is present in the Fertilizers and explain their advantages and disadvantages.
2. Describe in detail the manufacture of ammonia using Naphtha as feed stock.
3. Describe in detail the manufacture of Nitric acid.
4. (a) Discuss the applications of urea as Fertilizer.
(b) Describe in detail the manufacture of urea.
5. (a) Describe in detail the process for the manufacture of Ammonium nitrate.
(b) How will you improve the storage properties of Ammonium nitrate?
6. (a) What are the important reactions involved in super phosphate production?
(b) Describe a process for the manufacture of orthophosphonic acid.
7. (a) What is the purpose of potash application to plants?
(b) Explain in detail the process for the production of potassium phosphate fertilizer.
8. Discuss the specific problems experienced by Indian Fertilizer industry touching the following points.
 - (a) raw materials
 - (b) Energy
 - (c) Marketability
 - (d) Pollution laws.
