

Code No: 07A60801

R07

Set No. 2

**III B.Tech II Semester Examinations, APRIL 2011
CHEMICAL TECHNOLOGY
Chemical Engineering**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. What are the types of Phenol- Formaldehyde resins? How they are produced? [16]
2. Describe the extraction of sulphur by elemental sulfur mining. [16]
3. Explain the production of cement by lime stone beneficiation process and also discuss the major engineering problems in it. [16]
4. Describe the manufacture of phosphoric acid by hydrochloric acid leaching? Give the major engineering problems in the process. [16]
5. Explain the manufacture of soda ash by Leblanc process with chemical reactions. [16]
6. Describe the black liquor recovery. What are the by products of the black liquor recovery plant? [16]
7. How glycerin is manufactured from hydrolysis of sweet water? [16]
8. Describe the production oils via mechanical and solvent extraction methods. [16]

Code No: 07A60801

R07

Set No. 4

III B.Tech II Semester Examinations, APRIL 2011

CHEMICAL TECHNOLOGY

Chemical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Describe the production of any magnesium compound with a neat flow diagram. [16]
2. Discuss the production of sulphur by any process. [16]
3. Write short notes on the following terms related oil processing.
 - (a) Refining.
 - (b) Bleaching.
 - (c) Hydrogenation.
 - (d) Deodorization. [16]
4. Write a brief note on fatty acids & fatty alcohols which are consumed in manufacture of detergent & soap. [16]
5. Write a short note on:
 - (a) Colored and coated glasses.
 - (b) Photochromic silicate glasses. [8+8]
6. Discuss the major engineering problems involved in Kraft process? [16]
7. Define complex fertilizer? Discuss how they are produced in the industry? [16]
8. Explain the unit operations & unit processes involved in rubber production. [16]

Code No: 07A60801

R07**Set No. 1**

III B.Tech II Semester Examinations, APRIL 2011

CHEMICAL TECHNOLOGY

Chemical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What is cement? Explain the production of cement by cement rock beneficiation process with a flow diagram. [16]
2. Describe how carbon dioxide is recovered from the furnace gasses with a neat diagram. [16]
3. Write short notes on:
 - (a) Aluminum chloride
 - (b) Barium salts. [8+8]
4. Describe the Sulfate pulp process with block diagram. [16]
5. What are the various steps involved in the production of commercial soap Starting from the basic raw materials? Explain it. [16]
6. Write short notes on the following oils:
 - (a) Peanut oil.
 - (b) Coconut oil.
 - (c) Corn oil.
 - (d) Palm oil. [16]
7. (a) Give the uses of vinyl acetate monomer (or) polymer.
(b) Give a brief account of oxy esterification process. [6+10]
8. Write a short note on:
 - (a) Fused silica glass.
 - (b) Safety glass. [8+8]

Code No: 07A60801

R07**Set No. 3**

III B.Tech II Semester Examinations, APRIL 2011

CHEMICAL TECHNOLOGY

Chemical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Define paper? Describe the types of paper products ?
(b) Discuss the method of production of paper with a flow sheet ? [6+10]
2. Explain the manufacture of soda ash by Solvay process. Explain it with a neat flow chart. [16]
3. (a) What is glycerin? What are the uses of glycerin?
(b) Discuss the biodegradability of detergents. [8+8]
4. (a) Discuss about various sources available for the production of hydrochloric acid.
(b) Describe the extraction of sulphur by elemental sulfur mining. [4+12]
5. (a) Give a brief account on the use of edible and essential oils as a chemical raw material by the industry.
(b) Write the advantages and disadvantages of production of oils by mechanical and solvent extraction methods. [8+8]
6. Explain the steam hydrogen reforming process for the production of hydrogen? [16]
7. Describe any one method of producing phenol with a neat sketch. [16]
8. (a) Explain the production of cement by cement rock beneficiation process with a flow diagram.
(b) Discuss the major engineering problems involved in the manufacture of Portland cement. [10+6]
