

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

DEPARTMENT OF CHEMICAL ENGINEERING

B.Tech Degree Examination

End Semester Examination, November-2013

CH2001 CHEMICAL TECHNOLOGY

Time: 3 hour

Maximum Marks: 50

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1. Describe the manufacture of benzene by hydrodealkylation process, with the help of
 - a) Process Flow Diagram (3)
 - b) Brief description (2)
 - c) Chemical reactions (1)

 2. Explain the manufacture of acetylene by steam cracking of hydrocarbons, with the help of
 - a) Process Flow Diagram (3)
 - b) Brief description (2)
 - c) Chemical reactions (1)

 3. Explain how wood pulp is prepared by Kraft process, with the help of
 - a) Process Flow Diagram (3)
 - b) Brief description (2)
 - c) Chemical reactions (1)

 4. Describe the production of starch from maize, with the help of
 - a) Process Flow Diagram (3)
 - b) Brief description (2)
 - c) Chemical reactions (1)

 5. Discuss the manufacture of Potassium chloride from Sylvinit, with the help of
 - a) Process Flow Diagram (3)
 - b) Process description (3)

✓ 6. Explain the manufacture of soda ash by Solvay process, with the help of

a) Process Flow Diagram (3)

b) Brief description (2)

c) Overall chemical reaction (1)

✓ 7. Name the important physical properties of rubber. (2)

✓ 8. List out the important reactions for the manufacture of phenolic resins. (2)

✓ 9. What is synthesis gas? $\text{CO}_2 + \text{H}_2$ (1)

Explain the reforming reactions for the manufacture of synthesis gas. (1)

✓ 10. Name the important products of fermentation of molasses, with their composition. (2)

✓ 11. What is hydrogenation of oil? (1)

List out the important reactions involved in hydrogenation and catalyst preparation. (2)

✓ 12. Explain the different types of Portland cement. (2)

✓ 13. What are the different grades of nitric acid? (1)