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Total number of printed pages – 2

B. Tech.
PCCH 4202

Third Semester Examination – 2010

CHEMICAL PROCESS TECHNOLOGY

Full Marks – 70

Time : 3 Hours

Answer Question No. 1 which is compulsory and any **five** from the rest.

The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10
- With suitable example differentiate between unit process and unit operation.
 - Differentiate between soap and synthetic detergent.
 - Write the Chemical formula for oleic acid and stearic acid.
 - What are ABS resins ? Write down it's industrial application ?
 - What are the by products of sugar industry ?
 - Differentiate between hydrogenation and hydrolysis.
 - Differentiate between polyvinyl chloride (PVC) and polyvinyl acetate (PVA).
 - What is miscella and marc ?
 - Salt cake is chemically represented by _____ and the chemical formula for sodium thiosulfate is _____.
 - Chemical formula of Soda ash, and caustic soda is _____ and _____.

2. What do you mean by edible and non-edible oil; with a neat flow sheet describe the extraction of vegetable (edible) oil. 10
3. With neat flow sheet describe the manufacturing process of soda-ash. 10
4. List out the prominent detergents that are used world wide. With the help of chemical reaction discuss in detail about soap preparation from its basic raw materials. 10
5. What are the different fibrous and non-fibrous raw materials required for paper products ? Describe the manufacture of pulp by Kraft process, with neat sketches. List out the various chemicals that are recovered from chemical recovery unit. 10
6. What do you mean by carbohydrates? With a neat flow sheet describe the production process of sugar. 10
7. Describe the manufacturing process of phenol formaldehyde with all possible reactions. 10
8. What do you mean by polymerization ? Describe the method for the manufacture of polyethylene with all possible reactions. 10