

Total number of printed pages – 4

B. Tech
CPCH 7405

Eighth Semester Examination – 2008

ORGANIC CHEMICAL 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
- (a) What do you mean by hydrogenation of oil ? Name the extractor used for extraction of oil from oil seed in solvent extraction process.
- (b) Which catalyst is used for hydrogenation

of oil ? Write down the chemical reactions involved in the preparation of this catalyst.

- (c) Name different types of detergents. Mention the various uses of soap and detergents.
- (d) Mention the reactions involved in saponification process.
- (e) Write the chemical formula of disaccharide and starch.
- (f) What are the essential chemical reagents used in digester used for sulfate pulp process ?
- (g) Classify the paper according to the use of requirement. What is the use of tissue paper ?
- (h) Why bleaching of pulp is required ? What are the traditional bleaching agents used for this ?

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- (i) What is linden ?
- (j) What are the raw materials used for manufacture of phenol formaldehyde ?
2. With a neat flow diagram describe in detail about extraction of vegetable oil from oil seed along with its purification. 10
3. Describe about the manufacture of soap with a flow diagram. How glycerine is recovered during this process and purified to 99% white glycerine ? 5+5
4. Compare between sulfate and sulfite pulping processes for cellulose fibers manufacturing. Discuss the major engineering problems involved in these processes giving emphasis on pollution and waste disposal. 10
5. How ethyl alcohol is prepared by fermentation. Mention the main and side reactions involved in this process. Discuss about the major engineering problems and economics of ethyl alcohol industry. 10
6. Describe the manufacturing process of DDT with the help of a flow diagram. Mention the chemical reactions involved in it. 10
7. Define polymers. With a neat flow diagram describe the manufacturing process of polyethylene by low pressure Ziegler process. 10
8. Write short notes on any *two*: 5×2
- (a) BHC
- (b) Nylon 6
- (c) Terelene
- (d) Organic waste treatment in chemical industries
- (e) Waste utilization in sugar industry.

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