

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

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## **CM-5005(1)-CBGS**

### **B.E. V Semester**

Examination, June 2020

### **Choice Based Grading System (CBGS)**

### **Organic Process Technology**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain with flow diagram the manufacture of pulp with black-liquor recovery and reuse.  
b) Discuss various pollution related problems in pulp and paper industry.
2. a) Explain with a neat sketch the Kraft pulping process.  
b) Explain the process for manufacturing of ethylene glycol. Give important properties of ethylene glycol along with its industrial uses.
3. a) Draw a flowchart for refined cane sugar manufacturing process and explain the process.  
b) Name the various routes of alcohol production and explain one process giving flowsheet and other details of manufacturing.
4. a) List out the various chemicals obtained in aromatics classification. Give their properties, uses and the unit processes by which they are obtained.

CM-5005(1)-CBGS

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- b) Explain the manufacturing of styrene-butadiene rubber with a neat flow sheet.
5. a) Give the classification of dyes, based on dyeing process and application.  
b) Discuss the classification and characteristics of some major pesticides.
6. a) With a neat sketch explain the manufacture of Cellulose Acetate and PVC.  
b) How does the manufacture of polyester fibers take place? Explain it with a neat sketch.
7. a) Distinguish between natural and man-made fibers.  
b) What are the important properties of fibers as engineering materials? Describe the manufacture of cellulose acetate with neat flow diagram.
8. Write short notes on any three of following:
- a) By-products of sugar industry
  - b) Intermediates from petrochemicals
  - c) Nitration and nitrating agents
  - d) Manufacturing of benzene
  - e) Alcohol derivatives

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CM-5005(1)-CBGS