

Paper Code: CH-403

Roll No.

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**B.Tech.**  
**(SEM IV) EVEN SEMESTER EXAMINATION, 2015-16**  
**CHEMICAL TECHNOLOGY-I**

**[Time: 2 Hours]****[Total Marks: 50]****Note:** - Attempt **all** questions.

1. Attempt any **four** parts of the following: - **[3x4=12]**
- (a) Explain the unit operations and unit processes with suitable examples.
  - (b) Discuss the importance and overview of chemical process industries.
  - (c) Explain the procedure for reclaiming of rubber.
  - (d) Discuss the briefly the production of starch from corn.
  - (e) What are the various uses of citric acid and acetic acid in day to day life? Discuss.
  - (f) Describe the manufacturing of acetaldehyde from ethylene.
2. Attempt any **two** parts of the followings: - **[6x2=12]**
- (a) What are the various antibiotics that are commonly used for the medicine? Explain the manufacturing of any one with neat diagram.
  - (b) Describe the process for making of paper from pulp with neat sketch.
  - (c) What is the difference between soap and detergent? Explain the purpose of adding STTP during making of detergent.
3. Attempt any **two** parts of the followings:- **[7x2=14]**
- (a) What is Dacron? Write its major applications. Give a brief description of the process used for the production of Dacron.
  - (b) What are nylons? Name a few similar substances found in nature. Describe the manufacturing process of a common nylon with the help of chemical reactions involved.
  - (c) What do you understand by the terms thermosetting and thermoplasts? How the synthetic rubber differs from natural rubber? Support your answer with suitable examples.
4. Attempt any **two** parts of the followings:- **[6x2=12]**
- (a) Explain the hydrogenation of vegetable oil with neat sketch and also mention the reactions involved during process.
  - (b) Explain the production ethylene and propylene with flow sheet and reactions.
  - (c) Define 'petrochemicals'. Write notes on thermal cracking. What are the advantages of catalytic cracking over thermal cracking?