B.TECH.
THEORY EXAMINATION (SEM–IV) 2016-17
CHEMICAL TECHNOLOGY - I

Time : 3 Hours   *Max. Marks : 100*

Note : Be precise in your answer.

SECTION – A

1. **Explain the following:**   10 x 2 = 20
   (a) What do you mean by fermentation?
   (b) What is the pertinent properties of citric acid?
   (c) Define the PVC
   (d) Explain the visbreaking
   (e) Explain petroleum wax.
   (f) What is edible oil?
   (g) Explain Dacron.
   (h) What is drug? write the any five name of antibiotics drug.
   (i) Explain molasses.
   (j) Explain lube oil.

SECTION – B

2. **Attempt any five of the following questions:**   5 x 10 = 50
   (a) What is the difference between soap and detergents? Explain the manufacturing process of detergents.
   (b) With the neat and clean diagram explain manufacturing of sugar. Also discuss about the waste products from sugar manufacturing process.
   (c) **Write the short note on:**
      (i) Natural rubber
      (ii) Fatty acid
   (d) What is the difference between nylon-6 and nylon 6,6? Write the reaction involved in Nylon-6. Also discuss their applications.
   (e) Write the name various type of paper. With the neat and clean diagram explain paper manufacturing process.
   (f) What is vacuum distillation? Explain the vacuum distillation with the neat sketch.
   (g) What is the raw material for viscous rayon. Draw and explain viscous rayon manufacturing process.
   (h) Explain manufacturing process of cumene. Also discuss the engineering problem.

SECTION – C

Attempt any two of the following questions: 2 x 15 = 30

3. What do you understand by catalytic cracking? Catalytic cracking is superior to visbreaking process. Why? Explain the Catalytic cracking with a neat sketch.

4. What do you understand by vulcanization and reclaiming of rubber? With the help of neat and clean diagram explain manufacturing of SBR.

5. Describe the application of alcohol. Draw and explain manufacturing process of alcohol. Also discuss the chemical reaction involve in this process.