

**B.TECH.**

**Theory Examination (Semester-VI) 2015-16**

**FERMENTATION BIOTECHNOLOGY**

**Time : 3 Hours**

**Max. Marks : 100**

**Section-A**

**Q.I Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2×10 = 20)**

- a) What is the difference between submerged and solid state fermentation.
- b) Write name the first antibiotic, which is effective against tuberculosis.
- c) What is corn steep liquor used as raw material.
- d) Write the basic structural unit of cellulose and hemicelluloses.

(1)

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Explain the term microbial transformation.

**Section-B**

**Q2. Attempt any five parts. All parts carry equal marks:**

(5×10=50)

Write the importance of fermentation economics in brief.

List out raw material available in surroundings explain in brief.

Lac operon controlled by the catabolic process of microbes. Justify in brief?

Describe the technique in brief which is involved in over-production of metabolites.

(2)

**Section-C**

**Note: Attempt any two questions from this section.**

(2×15=30)

**Q3.** Explain the general concept of scale up and scale down in fermentation process.

**Q4.** Write down the procedure for industrial manufacturing of  $\beta$ -lactum.

**Q5.** Write down the storage preservation technique of micro-organism. Explain in brief. Write two names of microbial culture collection centre in India.

(3)

P.T.O.