COURSE CODE: 14M11BT211   MAX. MARKS:15

COURSE NAME: Industrial Biotechnology

COURSE CREDITS: 03   MAX. TIME: 1h

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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1. What is the significance of K_m, V_{max}, K_{cat} & specificity constant in enzyme-catalyzed reactions?   **(2M)**

2. Diffrentiate Michaleis- Menton Kinetics with Monod Kinetics?   **(2M)**

3. Write about the following historical events of IB for implementation of   **(2M)**

   (a) Pasteurization

   (b) Fed-batch Fermentation

4. What are the key commercial objectives for an Industrial Biotechnology? Mention the names of the key technological building blocks of Industrial Biotechnology?   **(2M)**

5. Summarize the comparative characteristics of SSF and SmF?   **(2M)**

6. Mention any two enzymes used in the following industrial applications of   **(2M)**

   (i) Cloudy appearance in fruit juices/wines

   (ii) Biopulping

   (iii) Decolurization of textile dyes

   (iv) Therapeutic activity (have to mention for which health ailment too)

7. Mention the drawbacks associated with the line-weaver burk plot for calculation of enzyme kinetic constants? What is the fate of K_m and V_{max} with competitive, non-competitive and un-competitive inhibitors associated with the enzyme catalyzed reactions?   **(3M)**

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