

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH
BRANCH: BIOTECH

SEMESTER : II
SESSION : SP/19

SUBJECT: BE515 PROCESS BIOTECHNOLOGY

TIME: 3.00 HOURS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall
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- Q.1(a) Explain the relationship between cell biomass and specific growth. Comments on factors governing the process of cell growth. [5]
- Q.1(b) Analyze the kinetics of product formation with different constants. [5]
- Q.2(a) Evaluate the process conditions for synthesis of enzyme alkaline protease. [5]
- Q.2(b) Discuss in brief about techniques of immobilization and its various characteristics. [5]
- Q.3(a) Discuss advantages of sterilization of growth medium with an example of sterilizer. [5]
- Q.3(b) What are the prominent characteristics for production of β -lactam antibiotics? [5]
- Q.4(a) Illustrate the process considerations for synthesis of citric acid. [5]
- Q.4(b) Explain the production of vitamin -B12. [5]
- Q.5(a) Comments on significance of utilization of biomass for production of ethanol. [5]
- Q.5(b) Mention the salient features required for design of sterilization process. [5]

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