

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2023

M.Sc (Biotechnology)-IIIrd Semester

COURSE CODE(CREDITS): 20MS1BT311 (3)

MAX. MARKS: 15

COURSE NAME: Bioprocess Engineering & Technology

COURSE INSTRUCTORS:Dr.Garlapati Vijay Kumar

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

1. What are the different positive aspects associated with the bioprocessing to incline over chemical processing? Explain briefly about the different steps involved in bioprocess development? (CO I) (3M)
2. What are the reasons for choosing rRNA for microbial classification? Discuss briefly about the important characteristics need to consider while selecting microbes for bioprocess /industrial biotechnology application? (CO I) (3M)
3. Write a note on the usage of enzymes in “Biobleaching and biopulping” and “Detergent“Industries? What are the therapeutic enzymes used in case of “Cyanide Poisoning” and “Penicillin allergy? (CO II) (3M)
4. What are the advantages and disadvantages associated with the submerged fermentation (SmF)? Write a note on the biotechnological advantages of solid-state fermentation (SSF) over submerged fermentation (SmF)? (CO II) (3M)
5. Differentiate the microbial cell cultivation with mammalian cell cultivation? Write a note on the classification of fermentation processes based on operation?(COI&COII) (3M)

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