

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

M.Sc (Biotechnology) –IIIrd Semester

COURSE CODE (CREDITS): 20MS1BT311 (03)

MAX. MARKS: 15

COURSE NAME: Bioprocess Engineering and 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 benefits associated with the bioprocessing over chemical processing? Depict the process design associated with the bioprocessing with a neat sketch? (CO I) (2.5 M)
2. Discuss briefly about the different steps associated with the Bioprocess Development by quoting the skills required and monitoring parameters? (CO I) (2.5 M)
3. What are the different reasons for considering “Actinomycetes” as bacteria rather than Fungi even it having filamentous fungi? What are the main differentiating feature of “homofermenters” and “heterofermenters” by mentioning products? (CO II) (2.5 M)
4. Discuss briefly about the different important characteristics to be foreseen in a microbe to be considered as a candidate for Industrial Biotechnology? (CO II) (2.5 M)
5. Write about the following one's (CO I & CO II) (2 x 2.5 = 5 M)
 - (a) Advantages of microbial cells over plant cells cultivation (2.5 M)
 - (b) Biotechnological advantages and its consequences of SSF against SmF (2.5 M)

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