

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

MSc -III Semester (BT)

COURSE CODE (CREDITS): 20MS1BT311 (3)

MAX. MARKS: 15

COURSE NAME: Bioprocess Engineering and Technology

COURSE INSTRUCTORS: Dr.Garlapati Vijay Kumar

MAX. TIME: 1 Hour

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

- Q1. Bioprocess products can be synthesized through microbial, plant and mammalian cells cultivations. Differentiate the mammalian cell cultivation with plant and microbial cultivations in a tabular form? (CO I) (3 M)
- Q2. Solid state and submerged fermentations are the two types of fermentations used for bioprocess products. Compare the characteristics of SSF with SmF and also summarize the biotechnological advantages of SSF over SmF? (CO II) (3 M)
- Q3. The present industrial production scenario inclining towards the biological approaches. Summarize the reasons behind the bio-revolution over chemical-based processes? Mention the different steps involved in a bioprocess product development? (CO I) (3 M)
- Q4. What is the main industrial microbe under non-spore forming firmicute and what are the ideal characteristics of the concerned microbe as a industrial candidate? How the suggested microbe differs with the actinobacteria? (CO II) (3 M)
- Q5. Mention the advantages of enzyme-based detergents over chemical-based ones? Name any three therapeutic enzymes along with their usage? (CO II) (3 M)

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