

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS- 2026

M.Tech-II Semester (BT)

COURSE CODE (CREDITS):14M11BT211 (03)

MAX MARKS: 25

COURSE NAME: Industrial Biotechnology

COURSE INSTRUCTOR: Dr. Garlapati Vijay Kumar

MAX. TIME: 1 Hour 30 Min

Note: (a) All questions are compulsory.

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

Q.No	Question	Marks
Q1	What are the seven major areas of research technologies needed for the progress of industrial biotechnology? Summarize the activities and research focus of the IB areas "Biocatalytic process design" and "Innovative downstream processing".?	5
Q2	Discuss in detail about the utilization of "Firmicutes" and "Actinomycetes" in Industrial Biotechnology as a favourable microbes for IB?	5
Q3	Describe the important characteristics in microbes used for industrial biotechnology. How do the design criteria of pharmaceutical products change from bulk products?	5
Q4	With a neat flow chart, summarize the different USP and DSP steps utilized for biopharmaceutical production. Write a note on the advantages and disadvantages of using mammalian cells for biopharmaceutical production?	5
Q5	Write about the practical applications of thermophiles and halophiles. Explain the different activities under "Antibody Characterization"?	5

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