

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- MAY-2023 (M.Tech (BT), IInd Sem)

COURSE CODE (CREDITS): 14M11BT211 (03)

MAX. MARKS: 25

COURSE NAME: Industrial Biotechnology

COURSE INSTRUCTORS: Dr. Garlapati Vijay Kumar

MAX. TIME: 1 Hour 30 Minutes

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

1. What are the main reasons for inclining towards Industrial Biotechnology? What are the key building blocks of Industrial Biotechnology and explain the purpose and research focus of each building block? **(CO II) (4 M)**
2. Mention the reasons behind utilizing rRNA as a basis for microbial classification? Explain briefly the important characteristics of microbe which suits for Industrial Biotechnology? **(CO II) (4M)**
3. What is the design criteria used in case of Industrial Biotechnology? How the design criteria changed with pharmaceutical product from bulk product and give two examples for Pharma and bulk products? **(CO III) (4 M)**
4. How the DSP and USP aspects changed with Pharmaceutical product with bulk product explain with a neat flowchart? **(CO III) (4 M)**
5. Depict the typical monoclonal antibody recovery process with a neat sketch by mentioning the purpose of each step? Why Protein A chromatography considered as a primary chromatography in DSP of Mab's? **(CO II & CO III) (4 M)**
6. Write about the following one's **(CO I & CO II & CO III) (5 M)**
 - (a) Reasons behind considering "Actinomycetes" as a Bacteria instead of Fungi (2.5 M)
 - (b) Antibody Characterization Steps and their purpose (2.5 M)

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