JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-Vth Semester (BT)

COURSE CODE (CREDITS):25B1WBT533 (03) **MAX. MARKS**: 15

COURSE NAME: Traditional Bioprocessing & their upscalng

COURSE INSTRUCTOR: Dr.Garlapati Vijay Kumar **MAX. TIME:** 1 Hour

Note: (a) All questions are compulsory.
(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems
(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	How the design criteria differ with the "bulk product" and "Pharmaceutical product"? Summarize the USP and DSP steps associated with the biopharmaceutical with a neat flow chart?	I	3
Q2	What are the advantages and disadvantages associated with the selection of "Mammalian cells" as an choice? Antibody characterization involves what type of activities and mentions the purpose of each activity?	I	3
Q3	As a specialist in BPE, suggest the different high cell density culture systems for Mab production by summarizing the associated common problems with the systems? Differentiate the disposable bioreactor "Cell cube" with "Cell factory"?	II	3
Q4	In DSP of Mab why we have to give prime importance to "Protein A chromatography"? Mention the advantages associated with the "Disposable reactors" over other type of Bioreactors in case of USP of Mab's?	II	3
Q5	Mention the different stages associated with the "Downstream processing" concept by explaining the purpose and techniques under each stage? With a neat flow chart depict a typical monoclonal antibody recovery process?	I & II	3