

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- April-2023

B.Tech-6th Sem (BT)

COURSE CODE(CREDITS): 20B1WBT631 (3)

MAX. MARKS: 25

COURSE NAME: Manufacturing Process and Industrial Products

COURSE INSTRUCTORS: Dr Udaya & Dr Garlapati

MAX. TIME: 1hour 30 minutes

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

1. Write any two databases related to the biomolecules along with the included information? "Pervaporation" and "Reverse Osmosis" operations are used for separation of which molecules/compounds? What do you know about the process characteristic of "RIPP Scheme" used in Bioseparations? (CO II) [5Marks]
2. What are the different laws associated with "Filtration", "Centrifugation" and "Precipitation"? Write the mathematical representation of each law along with the explanation of each term? (CO II) [4 Marks]
3. What do you know about "Malo-Lactic fermentation" utilized in red wine preparation? What characteristics make "Cork Oak" as ideal for a wine bottle cork component? (CO III) [3 Marks]
4. Differentiate enzymes as drugs and other drugs. From the current discovery and applications of enzymes, classify therapeutic enzymes based on the mechanism of action. [3 Marks] (COI)
5. The substrate and the reaction products of asparaginase have important roles in a number of metabolic processes from microbes to mammals. Explain the catalytic reaction of asparaginase and justify its utilization in the treatment of cancer such as leukemia. Write down the assay methods used for the evaluation of asparaginase activity. [5 Marks] (COI)
6. Write a note on glutaminase enzyme and support with examples to show glutaminase as a therapeutic agent. Explain its production, purification and assay processes. [5 Marks] (COI)