

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2023

B.Tech-VI Semester (BT)

COURSE CODE(CREDITS): 20B1WBT631(3)

MAX. MARKS: 35

COURSE NAME: Manufacturing Process and Industrial Products

COURSE INSTRUCTORS: Dr. Uday and Dr. Garlapati

MAX. TIME: 2 Hours

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

1. Differentiate "Enantiomer" with "Diastereomer" and "Racemic Mixture" and explain what you know about "Resolution of Racemic Mixture"? What are the different approaches available for resolution of racemic mixture? [4 Marks] (CO4,5)
2. Explain the concept of "Enantiomeric Excess (ee)" with a quantitative mathematical expression? Calculate the "ee of R" in a racemic mixture containing "60% R" and "40% S"? What are the advantages associated with the usage of biocatalysts in organic media? [4 Marks] (CO4,5)
3. Write about the concepts of "Kinetic Resolution" and "Dynamic Kinetic resolution" utilized in the resolution of racemic mixtures? What is the mathematical expression used to denote the enantiomeric purity of R enantiomer? [4 Marks] (CO4,5)
4. What are endophytes and explain its relevance in medicine and drug discovery? Write about the "Antiviral compounds" and "Anti-cancer compounds" from Endophytes? [4 Marks] (CO2)
5. Penicillin acylase (penicillin amidohydrolase, EC 3.5.1.11), formerly penicillin amidase, is probably the most important therapeutic enzyme. Show some light on its pharmaceutical importance, production and assay of penicillin acylase. [5 Marks] (CO1)
6. Wine is an alcoholic beverage made from fermented grapes or other fruits. Briefly discuss the process involved in the making of white and red wine. [5 Marks] (CO3)
7. Therapeutic enzymes are the biocatalysts used to treat medical conditions and diseases. Write a note on the following explaining the therapeutic enzymes and disease condition.
 - a. Fibrinolytics [3+3+3 Marks] (CO1)
 - b. Oncolytics
 - c. Gout