

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-3 EXAMINATION, MAY-JUNE 2016

B.Tech (Biotech), VIIIth Semester

COURSE CODE: 14111BT811

MAX. MARKS: 35

COURSE NAME: Bioprocess Plant Design

COURSE CREDITS: 3

MAX. TIME: 2 HRS

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. What are the familiar problems associated with plant cell cultures? Write in detail about the rheology behavior concept of plant cell cultures? (7 M)
2. Discuss in detail about the procedure for economic evaluation of biological product by describing the components needed for evaluation? (7 M)
3. What are the different complexities need to take care while scaling up of bioreactors? What are the common scale-up rules? Discuss the concept of "Scaling-down"? (7 M)
4. Mention the uses of metabolic flux analysis in case of Fermentation monitoring and optimization? Classify the centrifuges used in case of solid-solid separations? (7 M)
5. Write about the equipment used for separation of dissolved liquids and gas cleaning equipment? How "Steam distillation" differ from "Reactive distillation"? (7 M)

~~~~~ ALL THE BEST ~~~~~