DH-1695
M. Sc. (Integrated Biotechnology) (Sem. VII)
Examination
March / April - 2016
BT-1001 : Bioprocess Technology - I

Time : 3 Hours] [Total Marks : 70

Instructions :

(1) Fill up strictly the details of signs on your answer book.

Name of the Examination : M. SC. (INTEGRATED BIOTECHNOLOGY) (SEM. VII)
Name of the Subject : BT-1001 : BIOPROCESS TECHNOLOGY - I

(2) Figures to the right indicates full marks.
(3) Draw neat and labelled diagrams wherever necessary.

Q-1: Explain in detail Any Two:
(a) List the criteria for a good inoculum. What are the factors that need to be considered for choice of microorganisms? Discuss the process of inoculum development for an industrial process.
(b) Write a note on validation of Dry-heat sterilization.
(c) Comment on the important points of media designing for fermentation.

Q-2: Attempt Any Two:
(a) Write a detailed note on open loop control.
(b) Describe various methods used for the determination of OTR.
(c) Explain Gas-Liquid mass transfer in cellular systems.

Q-3: Explain in detail Any Two:
(a) CGMP and regulatory considerations in cell separation.
(b) Importance of Cross flow microfiltration in cell separation.
(c) Explain in detail various options considered by biotechnologists in pretreatment’s in downstream processing of biological.

Q-4: Attempt Any Two of the following:
(a) Explain recovery and purification any one enzyme.
(b) Define chromatography. Explain in detail hydrophobic interaction chromatography and its importance in product recovery.
(c) State the use of electrophoresis in product recovery processes.