DRR-1692
M. Sc. (Sem. VI) (Integrated Biotechnology) (CBCS) Examination
March / April - 2016
BT - 19 : Microbial Biotechnology (New Course)

Time : 2 Hours] [Total Marks : 50

Instructions:

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

Name of the Examination:
M. SC. (SEM. VI) (INTEGRATED BIOTECHNOLOGY)

Name of the Subject:
BT - 19 : MICROBIAL BIOTECHNOLOGY (NEW)

Subject Code No. 1 6 9 2 Section No. (1, 2,......) Nil

Seat No. Student's Signature

(2) Figures to the right indicate full marks.

(3) Draw neat and labelled diagrams wherever necessary.

1 Write answers to any four : 8

(a) How microbes can be modified?

(b) Define : Auxotrophic mutant.

(c) Define : Trophophase and Idiophase.

(d) Enlist types of products produced by microbes.

(e) Why headspace in fermentor is necessary?

2 Attempt any two : 14

(a) Describe concept of fermentation with schematic diagram.

(b) Explain different preservation techniques used for preservation of industrially important microorganisms.

(c) Describe methods for isolation utilizing selection of desired characteristics.
3 Explain in detail: (any two)
(a) Procedure for isolation of resistant mutant.
(b) Use of parasexual cycle as a way of strain improvement.
(c) Explain: The typical batch fermenter.

4 Attempt any two of the following:
(a) Write a note on various factors influencing fermentor design.
(b) Explain in detail: Aseptic operation and containment required in a fermentor.
(c) Explain various feedback control mechanisms regulating the biosynthesis of primary metabolites that can be utilized for selection of induced mutants.