DMM-1630
M. Sc. (Bioscience) (Microbiology)
(Sem. IV) Examination
March / April - 2016
BIOS-(M)-401 : Genetic Engineering & Bioinformatics

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. (BIOSCIENCE) (MICROBIOLOGY) (SEM. 4)

Name of the Subject :
BIOS-(M)-401 : GENETIC ENGINEERING & BIOINFORMATICS

Subject Code No. : 1630

Seat No. : Nil

Student’s Signature

(2) Figures to the right indicate full marks.

(3) Draw neat and labeled diagrams wherever necessary.

1 Answer the following questions : (any two) 18

(a) Describe in detail the significant of restriction endonuclease in genetic engineering.

(b) Explain the biology of plasmid and its significance as a vector.

(c) Explain the methods for screening expression libraries.

2 Answer the following questions : (any two) 18

(a) Explain the chain termination methods of DNA sequencing.

(b) Explain the pyrosequencing method for DNA sequencing.

(c) Describe the various forms of PCR.

[Contd...]
3   Answer the following questions: (any two)

(a) Define and discuss the bioinformatics as an interdisciplinary field.
(b) Explain any three nucleotide database.
(c) Elaborate on pairwise sequence alignment.

4   Attempt any one questions:

(a) Elaborate on the genome mapping.
   OR
(b) Discuss in detail: Two-dimensional electrophoresis.