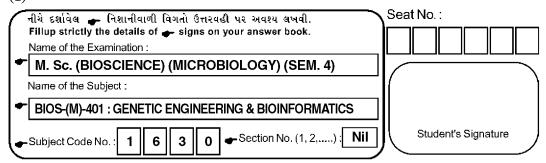|||||||||||||||||||||||||||||||||||||||||
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DMM-1630
M. Sc. (Bioscience) (Microbiology)
(Sem. IV) Examination
March / April - 2016
BIOS-(M)-401 : Genetic Engineering & Bioinformatics

Time : **3** Hours]   [Total Marks : **70**

Instructions :
(1)

(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.

3   Answer the following questions : (any **two**)   **18**

   (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 :   **16**

   (a)   Elaborate on the genome mapping.

OR

   (b)   Discuss in detail : Two-dimensional electrophoresis.

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