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SB-2716

M. Sc. (IN) (Part - I) (Microbiology) (Sem. II) Examination

March / April – 2011

MB-201 : Molecular Microbial Physiology & Enzymology

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

Instructions :

(1) નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **M. Sc. (IN) Microbiology (Part - 1) (SEM. 2)**

Name of the Subject :

☛ **MB-201 : MOLECULAR MICROBIAL PHYSIOLOGY & ENZYMOLOGY**

☛ Subject Code No. : **2 7 1 6** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks of the question.
(3) Draw neat and labelled diagrams whenever necessary.
(4) Both sections must be written in separate answer books.

1 Describe in detail about any three : **18**

(a) Elaborate your views on Primer designing.
(b) Explain two-hybrid system and give its importance.
(c) Write a note on Western blot.
(d) Explain Mutant hunt technique as a molecular tool to study microbial physiology.

2 Answer the following any three : **18**

(a) Write a note on regulation of signal transduction in two component system.
(b) Explain the details of stringent response.
(c) Discuss in detail about physiology and biochemistry of adaptations of hyperthermophiles.
(d) Discuss in detail about initiation of sporulation in Bacillus subtilis.

3 Explain in detail any three : **18**

(a) Write a note on metalloenzymes.

(b) Discuss the x-ray crystallography for protein structure determination.

(c) Write a note on acid-base catalysis.

(d) Give an account of technique for determination of amino acid sequence.

4 Write notes on any two : **16**

(a) Kinetics of allosteric enzymes.

(b) Multisubstrate enzyme-catalyzed reactions.

(c) Non-competitive inhibition.
