



S-2617

**M. Sc. (Part - I) (Microbiology) Examination**  
**March / April - 2011**  
**MB-102 : Molecular Biology**

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

(1)

नीचे दशांशवैल निशानीवाणी विगतो उत्तरवडी पर अवश्य दधवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
← M. Sc. (PART - 1) (MICROBIOLOGY)	<input type="text"/>
Name of the Subject :	<input type="text"/>
← MB-102 : MOLECULAR BIOLOGY	<input type="text"/>
← Subject Code No. : <input type="text"/> 2 <input type="text"/> 6 <input type="text"/> 1 <input type="text"/> 7 ← Section No. (1, 2.....) : <input type="text"/> NIL	<input type="text"/>
	Student's Signature

- (2) Figures to the **right** indicate full marks of the question.  
(3) Draw neat and labeled diagrams whenever necessary.

- 1 Attempt any **Three** 18
- (a) "Histone H1 inducess tighter DNA wrapping around the nucleosome." justify
- (b) Describe in detail about nucleosome as building blocks of chromosomes.
- (c) "Major groove is rich in chemical transformation" Explain
- (d) "Genome size is related to complexity of the organism" Justify.
- 2 Describe in detail : (any **three**) 18
- (a) Models of DNA replication
- (b) Transposons
- (c) Enzymology of DNA synthesis
- (d) DNA replication process.
- 3 Explain in detail : (any **three**) 18
- (a) Genetic code
- (b) Translation
- (c) Types of RNA
- (d) Role of various protein factors in eukaryotic transcription.
- 4 Write Notes on : (any **two**) 16
- (a) trp operon
- (b) Catabolite repression
- (c) Regulatory RNA.