



A-1509

M. Sc. (Sem. III) (Microbiology) Examination

March/April – 2015

**MB 301 : Molecular Diagnosis &
Molecular Pathogenesis**

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशिक निशानीवाणी विगतो उत्तरवही पर अवश्य लખवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="M. Sc. (Sem. III) (Microbiology)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="MB 301 : Molecular Diagnosis & Molecular Pathogenesis"/>	<input type="text"/>
Subject Code No. : <input type="text" value="1"/> <input type="text" value="5"/> <input type="text" value="0"/> <input type="text" value="9"/>	<input type="text"/>
Section No. (1, 2,.....): <input type="text" value="Nil"/>	<input type="text"/>
	Student's Signature

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

- 1 Answer the following : (Any two) 18
- (a) Explain the role of non amplified nucleic acid probes in molecular detection of pathogens.
- (b) Describe various probe amplification techniques.
- (c) Explain different types of PCR used in target amplification techniques.
- 2 Attempt the following : (Any two) 18
- (a) Phagocytosis in macrophage v/s PMNs.
- (b) Discuss the attachment of enteropathogenic *E coli* and shigella.
- (c) Explain the mechanism for inhibiting phagocytes and growth of pathogens in it.

- 3** Answer the following : (Any two) **18**
- (a) Discuss the direct spread and spread via other pathways of microbes in human body.
 - (b) Describe destruction of cells by microbial toxin with suitable example.
 - (c) What are the host and microbial factors that influence susceptibility ?
- 4** Write short notes on the following : (any two) **16**
- (a) Gene concept for plant host and pathogen.
 - (b) Genetics of virulence in plant pathogen.
 - (c) Horizontal and vertical resistance in plant host.
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