



AB-3135
Third Year B. Sc. (Sem. V) Examination
March/April – 2015
Microbiology : MB - 11
(Microbial Genetics) (New Course)

Time : Hours]

[Total Marks : 50

Instructions :

(1)

<p>नीचे दर्शावेक निशानीवाणी विगतो उत्तरवही पर अवश्य कपनी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : Third Year B. Sc. (Sem. 5)</p> <p>Name of the Subject : Microbiology : MB - 11 (New)</p> <p>Subject Code No. : 3 1 3 5 Section No. (1, 2,.....): Nil</p>	<p>Seat No. : □ □ □ □ □ □</p> <p style="text-align: center;">Student's Signature</p>
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- (2) Figures to the **right** indicate full marks.
(3) Draw neat and labelled diagrams wherever **necessary**.

1 Give specific answers : 12

- (a) Define :
(1) Mutagens
(2) Intercalating agent.
- (b) State the role of Helicase and topoisomerase enzyme in DNA replication .
- (c) Define RNA polymerase core enzyme and state its function.
- (d) Define base analogs with example.
- (e) State the importance of plasmids, R-factor and Col-plasmids.
- (f) How do the Prokaryotic gene structure differ from that of Eukaryotic gene structure ?

2 Attempt any **two** of the following : 12

- (a) Explain with experiment that "physical contact is essential between the cells for gene transfer".
- (b) Write an account on the process of transcription in bacteria.
- (c) Define mutation. Explain causes of spontaneous mutation.

- 3** Answer any **two** of the following : **16**
- (a) Explain the excision and recombinational of repair mechanism of DNA.
 - (b) Explain the various phases of the elongation of the polypeptide chain.
 - (c) Distinguish LFT and HFT Lysates. Discuss the process of Generalised and specialised transduction.
- 4** Write short note on any **two** of the following : **10**
- (a) Organisation of DNA in cells
 - (b) Mechanism of transformation
 - (c) The Replication mechaninery.
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