

# **AE-793**

M.Sc. (Previous)  
Term End Examination, 2016-17

## **MICROBIOLOGY**

Paper - III

Molecular Biology

*Time : Three Hours] [Maximum Marks : 100*  
*[Minimum Pass Marks : 36*

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**Note** : Answer **all** questions. All questions carry equal marks.

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### **Unit-I**

1. Describe Watson and Crick model of DNA and draw well labelled diagram.

#### ***OR***

Write short notes on any **two** of the following :

- (a) Leading and lagging strands
- (b) DNA polymerases
- (c) Topoisomerases

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### **Unit-II**

2. Describe DNA replication in Retro viruses.

***OR***

Write short notes on any **two** of the following :

- (a) Types of DNA damages
- (b) Mismatch repair
- (c) Excision repair

### **Unit-III**

3. Describe the types of RNA in detail.

***OR***

Write short notes on any **two** of the following :

- (a) Attenuation
- (b) Initiation of transcription
- (c) RNA polymerases

### **Unit-IV**

4. Describe Lac operon.

***OR***

( 3 )

Write short notes on any **two** of the following :

- (a) Negative regulation
- (b) Positive regulation
- (c) t-RNA synthesis

#### **Unit-V**

5. Describe the formation of Initiation complex in translation.

***OR***

Write short notes on any **two** of the following :

- (a) Signal hypothesis
- (b) Rho-dependent termination
- (c) In vitro transcription-translation system