

USMBT08 - Microbiology Paper-II : Microbial Genetics and Molecular Biology

P. Pages : 2

Time : Three Hours



GUG/W/23/12013

Max. Marks : 50

1. Explain in detail the working mechanism of Lac operon. **10**

OR

a) What are split genes? **2½**

b) Explain nucleosome model of DNA. **2½**

c) Explain the concept of exon and intron. **2½**

d) Describe central dogma of gene action. **2½**

2. Explain in detail the process of DNA replication. **10**

OR

a) Explain frame shift mutation. **2½**

b) Describe Ames Test **2½**

c) Explain semiconservative mode of replication. **2½**

d) Describe point mutation.. **2½**

3. Explain the mechanism of Translation in detail. **10**

OR

a) Give the structure and mechanism of RNA Polymerase. **2½**

b) Explain the process of mRNA processing. **2½**

c) Give the different characteristics of genetic codes. **2½**

d) Explain the process of reverse transcription. **2½**

4. Explain the mechanism of bacterial transformation. **10**

OR

a) What is U tube experiment? **2½**

b) Give the mechanism Generalised transduction. **2½**

- c) What are transposons? 2½
- d) Explain the formation life cell. 2½

5. Solve any ten.

- a) Define intron. 1
- b) What are pseudo genes? 1
- c) Which enzyme did *lac-z* gene code? 1
- d) Define transversion. 1
- e) Define SSB. 1
- f) What does BER stands for? 1
- g) Define Pribnow box 1
- h) What is start codon? 1
- i) What is the function of sigma factor? 1
- j) What is f' prime cell. 1
- k) What is Sexduction? 1
- l) Give example of stop codon. 1
