

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

P. Pages : 2

Time : Three Hours



GUG/W/24/12013(S)

Max. Marks : 50

1. Explain in detail about tryptophan operon in E.coli. **10**

OR

a) Explain central dogma of gene action. **2½**

b) Describe recon, muton and cistron. **2½**

c) Write about Nucleosome model. **2½**

d) Write about positive regulation. **2½**

2. Describe the DNA replication process in detail. **10**

OR

a) Explain the physical agent of mutation. **2½**

b) Write about missense mutation. **2½**

c) Write about Ames test. **2½**

d) Describe the action of intercalating agent on mutation. **2½**

3. Write in detail about translation process. **10**

OR

a) Write about m-RNA processing. **2½**

b) Write about RNA polymerase enzyme. **2½**

c) Write any three characteristics of genetic code. **2½**

d) Write about alternate splicing. **2½**

4. Write in detail about Griffith experiment. **10**

OR

a) Write about U tube experiment. **2½**

- b) Explain the mechanism of conjugation 2½
- c) Write about generalized transduction 2½
- d) Explain the formation of F prime cell 2½

5. Answer **any ten** of the following (1 mark each). **10**

- a) What is Exon?
- b) What is negative regulation?
- c) Name the structural genes present in the Lac operon?
- d) What is silent mutation?
- e) What is transversion mutation?
- f) What is the role of DNA Helicase?
- g) Give the example of initiation codon?
- h) Name the first amino acid synthesized by translation.
- i) What is reverse transcription?
- j) What is Hfr cell?
- k) What is transposon.
- l) What is sexduction?
