B.Sc. (C.B.C.S. Pattern) Sem-IV

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

P. Pages : 2 **GUG/W/19/12013**

Time : Three Hours * 3 6 8 8 * Max. Marks : 50

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1. Describe in detail the trp operon in E-Coli. **10**

OR

a) Write about the structure of nucleosome model. **2½**

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

c) Explain the central dogma of gene action. **2½**

d) Describe negative regulation with example. **2½**

2. Describe the effect of chemical agents on mutation. **10**

OR

a) Explain transition and transversion mutation. **2½**

b) Write about replica plating technique. **2½**

c) Explain the function of DNA helicase and DNA ligase. **2½**

d) Describe the effect of UV radiation on mutation. **2½**

3. Explain the process of splicing in detail. **10**

OR

a) Describe Wobble hypothesis. **2½**

b) Write about structure of RNA polymerase. **2½**

c) Write about elongation step of translation. **2½**

d) Explain m-RNA processing. **2½**

4. What is transduction? Explain specialized transduction. **10**

OR

a) Explain Griffith experiment. **2½**

b) How the Hfr cells are produced? **2½**

c) Write about sexduction. **2½**

d) Write about transposon. **2½**

5. Write any 10 questions.

a) What is Missense mutation? **1**

b) What is pseudo gene? **1**

c) What is inducer? Give example. **1**

d) What is intron? **1**

e) What is the role of SSB protein. **1**

f) What is nonsense mutation. **1**

g) Name the termination codons. **1**

h) Name the type of ribosome involved in translation. **1**

i) What is pribnow box? **1**

j) What is IS elements? **1**

k) What is abortive transduction? **1**

l) What is conjugation? **1**

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