

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Sc.(MLT) (Biochemistry) (2015 to 2017) (Sem.-3)

MOLECULAR BIOLOGY

Subject Code : MMLT-303

Paper ID : [E1336]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- 1) Give a detailed account of Watson and Crick model of DNA molecule.
- 2) a) Describe briefly the main features of genetic code and also discuss what is degeneracy of codon. Give its functions.
b) Write short notes on :
 - i. Heterochromatin
 - ii. Oncogene
- 3) a) Discuss in detail the events of crossing over in meiosis. Explain with the help of a schematic diagram.
b) Write a short note on chromosome map.
- 4) Write short notes on :
 - a) Lampbrush chromosome
 - b) Spliceosome
 - c) Recombinant DNA technology
- 5) Describe in detail the construction of genomic libraries. What are its applications?
- 6) a) What is a mutation? Discuss various types of chromosomal mutations with the help of suitable examples.
b) Write short note on Gene polymorphism.
- 7) Write short notes on :
 - a) Promoter
 - b) Cosmids
 - c) Transcription and Translation
- 8) Describe in detail the process of gene expression regulation in eukaryotes.