**PG Even Semester (CBCS) Exam., May—2017**

MICROBIOLOGY

**( 2nd Semester )**

Course No. : MIBCC–202

**( Molecular Biology and Recombinant DNA Technology )**

*Full Marks* : 70
*Pass Marks* : 28

*Time* : 3 hours

*The figures in the margin indicate full marks for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

**1.** Describe the structure of DNA with the help of diagram. Add a note on DNA polymerases. 8+6=14

**2.** Write notes on the following : 7+7=14

*(a)* Endonuclease and exonuclease enzymes

*(b)* Arrangement and function of mRNA





UNIT—II

**3.** Define mutation. Explain spontaneous and induced mutation with example. 2+12=14

**4.** Write notes on the following : 7+7=14

*(a)* Mismatch repair

*(b)* Intercalating agents as mutagens

UNIT—III

**5.** Describe translation process in prokaryotes. 14

**6.** Write notes on the following : 7+7=14

*(a)* Charging of tRNA

*(b)* Rho-dependent termination

UNIT—IV

**7.** What are cosmids? Describe construction of cosmids with diagram. 2+12=14

**8.** Write short notes on the following : 7+7=14

*(a)* Genomic library

*(b)* Expression vector

UNIT—V

**9.** Describe DNA sequencing methods. 14

**10.** Write notes on the following : 7+7=14

*(a)* Recombinant vaccine

*(b)* Application of PCR

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