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Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.(BT) (2011 & Onwards) (Sem.-3)

RECOMBINANT BIOTECHNOLOGY

Subject Code : MSBT-205

Paper ID : [F0263]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students has to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students has to attempt any **TWO** questions.

SECTION-A**Q1. Write brief note on the following :**

- a. Cosmid
- b. Southern Blotting
- c. BAC
- d. Selectable Markers
- e. Electrophoresis
- f. Reverse Transcriptase
- g. pBR.322
- h. His Tagging
- i. Linkers
- j. Prepare restriction Map from the given data :

Plasmid size = 7Kb, Fragments produced with restriction enzyme A= 3Kb+4Kb, enzyme B= 3.3 Kb+3.7 Kb; Enzymes A + B= 1.2 Kb, 1.5Kb, 1.8Kb and 2.5Kb.

SECTION-B

- Q2. Describe the phosphorimidite method of Chemical Synthesis of DNA.
- Q3. Describe the various PGR based methods with applications in rDNA.
- Q4. Explain strategy for maximizing the expression of a heterologous eukaryotic gene in a prokaryote.
- Q5. Write the protocol for DNA fingerprinting.
- Q6. How does DBT, Govt. of India regulate R-DNA work in the country?

SECTION-C

- Q7. Discuss Direct/ Indirect methods of screening for transformants.
- Q8. Describe the strategies for carrying out gene therapy to cure genetic disorders in man.
- Q9. Explain the process of obtaining various types of labeled nucleic acid probes.