AB-3137
B. Sc. (Sem. V) Examination
March/April – 2015
MB-13 rDNA Technology

Time : 2 Hours] [Total Marks : 50

Instruction:

- Fill up strictly the details of signs on your answer book.
- Seat No.:
- Student's Signature

1 Give specific answers: 10

(a) What is cDNA library?
(b) What are reporter genes? Explain with examples.
(c) Define:
   (i) Site directed mutagenesis.
   (ii) Charon phages.
(d) List the four characteristics of ideal host for cloning vectors.
(e) Name few organisms used for bio-remediation.

2 Answer any two of the following: 12

(a) Explain: Gene fusions are useful in studying gene regulation.
(b) Explain: Antibodies and nucleic acid probes are used to detect right clones.
(c) Briefly describe bioremediation of organophosphate pesticide.

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[Contd...
3  Answer any **two** of the following:

(a) Describe the important components and functions of Ti plasmid.

(b) Describe two mechanisms by which transfection of eukaryotic cells occur.

(c) Describe blue-white screening in detail.

4  Write short notes on any **three** of the following:

(a) Northern-VS-Southern blotting techniques

(b) Production of recombinant therapeutic proteins

(c) Essentials of molecular cloning

(d) Restriction - modification enzymes

(e) Cassette mutagenesis.