

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2015

(CUCSS)

Microbiology

MB 4E 05—GENETIC ENGINEERING

Maximum : 36 Weightage

Time : Three Hours

I. Write short answer to the following. Answer *all* the following. Each question carries 1 weightage :—

- 1 Restriction enzymes.
- 2 TA cloning.
- 3 ddNTP.
- 4 Linkers.
- 5 Ligation.
- 6 Nested PCR.
- 7 Colony hybridisation.
- 8 Probes.
- 9 X-gal.
- 10 Multiple cloning sites.
- 11 Plasmid copy number.
- 12 *Taq* DNA polymerase.
- 13 Agarose gel electrophoresis.
- 14 Yeast transformation.

(14 x 1 = 14 weightage)

II. Write a short paragraph on any *seven* of the following. Each question carries 2 weightage :—

- 15 RAPD.
- 16 Site Directed Mutagenesis.
- 17 Methods to prevent self ligation of vector during cloning.
- 18 cDNA library.
- 19 SDS-PAGE.
- 20 Fish.

Turn over

21 *Agrobacterium* mediated transformation.

22 BAC.

23 Differential display PCR.

24 Microinjection.

III. Explain the following. Answer any *two* of the following. Each question carries 4 weightage :— (7 x 2 = 14 weightage)

25 Northern Blotting and its applications.

26 AFLP and its applications.

27 DNA sequencing methods and its applications.

(2 x 4 = 8 weightage)