C 28216   (Pages : 2)   Name..................................

Reg. No.............................

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JULY 2012

Microbiology

MB 4E 05—GENETIC ENGINEERING

(2010 Admissions)

Time : Three Hours   Maximum : 36 Weightage

I. Write short answers to the following. Answer *all* questions. Each question carry 1 weightage.

    1 Cloning vectors.

    2 Alkaline phosphatase.

    3 IPTG.

    4 Hybridisation probe.

    5 Dicer.

    6 dNTP.

    7 Inverse PCR.

    8 DNA ligase.

    9 ORF.

    10 Homopolymer tailing.

    11 cDNA.

    12 Agrobacterium mediated transformation.

    13 Plaque lift assay.

    14 Polynucleotide kinase.

(14 x 1 = 14 weightage)

II. Write short paragraph answers to the following. Answer any *seven* questions. Each question carry 2 weightage.

    15 Protein Engineering.

    16 YACs.

    17 FISH.

    18 RFLP.

Turn over

19 Particle bombardment.

20 GUS assay

21 RNA interference.

22 Probe labeling.

23 Multiplex PCR.

24 Southern blot detection.

(7 x 2 = 14 weightage)

III. Explain following. Answer any *two* questions. Each question carry four weightage :—

25 Explain western blotting with its applications.

26 Discuss AFLP with its applications.

27 Discuss 5' and 3' RACE with specific applications.

(2 x 4 = 8 weightage)