25021192

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Reg. No.....

Name.....

M.Sc. (BIO TECHNOLOGY) DEGREE (C.S.S.) EXAMINATION FEBRUARY 2025

Third Semester

BTPG12—RECOMBINANT DNA TECHNOLOGY

(2018 Admissions—First Mercy Chance/2017 Admissions—Second Mercy Chance, 2016 Admissions—Third Mercy Chance and 2015 Admissions—Last and Final Special Mercy Chance)

Time : Three Hours Maximum Weight : 30

I. Write brief notes on any *five* : (Weight 1 each) :

1 Restriction Endonucleases.

2 Applications of Nanoparticles.

3 Site directed mutagenesis.

4 Bacterial artificial chromosome.

5 RAPD

6 Liposome mediated gene transfer.

7 Ti Plasmids.

8 DNA footprinting.

(5 × 1 = 5)

II. Write short Essay on any *five* (Weight 2 each) :

9 Adapters, Linkers and Homopolymer tailing.

10 Gene silencing

11 Structure and properties of pUC cloning vectors.

12 Blue white screening.

13 Types and properties of molecular markers.

Turn over

14 Fusion tagged expression vectors.

15 Bioethical aspects of RDT.

16 DNA microarray.

(5 × 2 = 10)

III. Answer any *three* in Detail (Weight 5 each) :

17 Explain in detail the genomic and cDNA library construction.

18 Explain blotting techniques in detail.

19 PCR types and its applications.

20 Explain in detail the methods followed in selection of recombinants.

21 Describe briefly the applications of RDT in the field of medicine and agriculture.

22 Explain the properties of various phage based cloning vectors.

(3 × 5 = 15)