

D 51716

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Name

Reg. No.....

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION
DECEMBER 2013**

(CUCSS)

Biotechnology

GB 3C1 – GENETIC ENGINEERING

Time : Three Hours

Maximum : 36 Weightage

Section A

Answer all questions.

1. What are thermostable polymerase?
2. What is a complementation?
3. What is RNAase protection assay?
4. What are phagemids?
5. What is plaque lift assay?
6. What is phage display?
7. What is DNA bar coding?
8. What is PAC?
9. What are homing endonucleases?
10. What are the uses of alkaline phosphatase?

(10 x 1 = 10 weightage)

Section B

Answer any seven questions.

11. What are the different classes of restriction endonuclease?
12. What are the differences and similarities between M 13 mp vectors and phagemids?
13. Explain in vitro packaging of λ phage vectors.
14. Explain the features of an ideal vector for animal cell lines with a suitable example.
15. Briefly explain the methods for labelling nucleic acid probes.
16. Compare and contrast PCR and RAPD.

Turn over

17. What are the different steps in the construction of genomic library?
18. Briefly explain the principle behind Spi selection.
19. Explain the DBT guidelines for biosafety.
20. Explain the ethics of gene cloning.

(7 x 2 = 14 weightage)

Section C

Answer any two questions.

21. Explain in detail the techniques for elucidating Nucleic acid – protein interactions.
22. What is qRT PCR? Compare and contrast CYBR GREEN and Taqman system.
23. Briefly explain the techniques for solubilising the foreign protein over expressed in a heterologous system.

(2 x 6 = 12 weightage)
