C 81825 (Pages : 2) Name

Reg. No. . . . . .

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL/MAY 2015

(UG—CCSS)

Core Course—Microbiology

MB 4B 06—MICROBIAL GENETICS AND GENETIC ENGINEERING

Time : Three Hours Maximum : 30 Weightage

## Section A

*Answer* **all** *questions.*
*Each question carries* 1 *weightage.*

1. Plasmids that confer resistance to antibiotic is called
2. The binding site for RNA polymerase is
3. The transfer of genetic material from one bacterium to another through a phage is
4. The DNA strand synthesised in a discontinuous way during replication is
5. PBr322 is a vector.
6. The aminoacid -tRNA bond is called
7. Shine-Dalgarno sequence is associated with
8. The genes whose expression cannot be regulated are
9. Anticodons are found at
10. The bond that connects adjacent nucleotides in nucleic acids is
11. The region where the lac repressor binds is called
12. Enzyme that unwinds ds DNA during replication is

(12 x = 3 weightage)

## Section B

*Answer* **all** *questions in one or two sentences.*
*Each question carries 1 weightage.*

13. Transduction.
14. Codon.
15. Col plasmid.
16. Taq polymerase.
17. cDNA.
18. Electroporation.
19. Eco RI.
20. Ligase.
21. RNA primer.

(9 x 1 = 9 weightage)

Turn over

## Section C

*Write notes on any* **five** *questions.*
*Each question carries* **2** *weightage.*

**22. Southern blotting.**

**23. RNA polymerase.**

**24. Replication fork.**

**25. Expression vector.**

**26. Gene therapy.**

**27. Cesium chloride centrifugation.**

**28. Hfr strain.**

**(5 x 2 = 10 weightage)**

## Section D

*Answer any two questions.*
*Each question carries* **4** *weightage.*

**29. Explain PCR. List the different types of PCR and their applications.**

**30. Give an account on different types of RNA and their functions.**

**31. Explain the different methods used for introducing foreign DNA into the cell.**

**(2 x 4 = 8 weightage)**