Reg. No. | | | | | | | | | | |

BSCMBC 252

Credit Based Fourth Semester B.Sc. Degree Examination, April/May 2017
(Common to all Batches, Semester Scheme)
MICROBIOLOGY
Paper – IV : Molecular Biology and Biotechnology

Time : 3 Hours Max. Marks : 80

Instructions : *1) Answer both Part – **A** and Part – **B**.*
*2) **Draw** diagrams **wherever** necessary.*

PART – A

1. Answer **any ten** of the following : **(2×10=20)**

a) Recon.

b) Phagemids.

c) Translocation mutation.

d) R_f value.

e) Reverse transcriptase.

f) Chimera plasmid.

g) Stationary phase.

h) Activation of Amino acids.

i) Passenger DNA.

j) Base Analogues.

k) Initiation complex.

l) Tracking dye.

P.T.O.

PART – B

Answer **any four** questions, choosing **one full** question from **each** Unit.

UNIT – I

2. a) Write a note on central dogma of molecular biology.
   b) Write a note on transport of proteins.
   c) Discuss the concept of lac operon. **(4+4+7 =15)**

OR

3. a) Write a note on cistron.
   b) Write briefly on the modifications of proteins.
   c) Define Genetic code. Explain the properties of genetic code. **(3+5+7 = 15)**

UNIT – II

4. a) Write a note on Biochemical Mutations.
   b) Explain frame shift mutation.
   c) Discuss the Physical, Chemical and Biological agents causing mutation. **(4+4+7=15)**

OR

5. a) Write briefly on Mutants.
   b) Write a note on spontaneous base pair substitutions.
   c) Discuss the phenotypic variations in Micro-organisms. **(3+5+7 = 15)**

UNIT – III

6. a) Write a note on Bioindicators.
   b) Discuss on restriction endonucleases.
   c) Discuss the production of transgenic plants through recombinant DNA Technology. **(4+4+7 =15)**

OR

7. a) Write briefly on host for cloning.
   b) Write a note on Gene Therapy.
   c) Discuss the principles of recombinant DNA technology. **(3+5+7 = 15)**

UNIT – IV

8. a) Write a brief note on agarose gel electrophoresis.
   b) Write a note on principle underlying chromatographic separations and their applications.
   c) Discuss the principles and procedure for thin layer chromatography. **(4+4+7 =15)**

OR

9. a) Write a note on visualizing agents.
   b) Explain briefly about circular paper chromatography.
   c) Discuss the principle and procedure for SDS-Page. **(3+5+7 = 15)**
