

Bachelor of Science (B.Sc.-II) Fourth Semester
B.Sc. 2432 - Zoology Paper-II (Genetics and Genetic Engineering)

P. Pages : 2

Time : Three Hours



GUG/W/18/1305

Max. Marks : 50

- Notes :
1. All questions are compulsory.
 2. All questions carry equal marks.
 3. Draw diagrams wherever necessary.

1. Write in detail on protein synthesis. 10

OR

a) Genic balance mechanism.

b) Kappa particle in Paramecium.

2. Describe in detail isolation of DNA by shotgun method. 10

OR

a) Genetic transformation.

b) Blunt end ligation.

3. Attempt the following. 10

a) Draw well labelled diagram of DNA double helix.

b) Milk factor in mice.

c) DNA polymerase.

d) Transfection.

OR

e) Draw neat labelled diagram of cloverleaf model of tRNA.

f) Base pair substitution.

g) Positive eugenics.

h) Cohesive end ligation.

4. Attempt the following. 10

a) Lac operon.

b) Frame shift mutation.

c) Bacteriophage as cloning vector.

d) Monoclonal antibodies.

OR

e) r-RNA.

f) Radiation as mutagenic agent.

g) Cosmids.

h) Transgenesis.

5. Write four or five lines on each of the following **any ten**.

10

i) Recon.

ii) Initiation codon.

iii) Nucleotide.

iv) Silent mutation.

v) Non-sense mutation.

vi) 5-BU.

vii) Colony hybridization.

viii) Plasmid.

ix) Topoisomerase.

x) Transduction.

xi) Linker DNA.

xii) Recombinant DNA.
