

M.Sc.(Biotechnology) (Old / CBCS Pattern) Third Semester
BT3-T011 / PSBIT111 - Paper-III : Genetic Engineering

P. Pages : 1

Time : Three Hours



GUG/W/18/11238

Max. Marks : 80

Notes : 1. All the questions are compulsory and carry equal marks.

1. Discuss different methods for isolation and purification of gene. 16

OR

Write note on-

a) DNA Polymerases. 8

b) DNA Topoisomerases. 8

2. Discuss in detail on plasmids as vectors in genetic engineering. 16

OR

Describe the methods for Insertion of foreign DNA in vector and host cell. 16

3. Discuss nucleic acid hybridization with respect to southern and northern hybridization. 16

OR

Write note on following-

a) Antibody Probes. 8

b) Automated DNA sequencing. 8

4. Describe in detail various chemical methods used for transfection. 16

OR

Write note on the following-

a) Gene transfer by pronuclear microinjection. 8

b) Single and two strain packaging. 8

5. Write short notes on-

a) Restriction- Modification System. 4

b) Phagemid vectors. 4

c) cDNA library 4

d) DNA uptake by bacterial cells. 4
