

B.Sc. (CBCS Pattern) Sem-VI
012F - Botany Paper-II : Plant Biotechnology-II

P. Pages : 2

Time : Three Hours



GUG/W/22/13332

Max. Marks : 50

- Notes :
1. All question are compulsory & carry equal marks.
 2. Draw well libellee diagrams wherever necessary
 3. Illustrate your answers with suitable examples.

1. Write on:

- a) What is gene transfer? Describe microinjection & silicon carbide mediated gene transfer. 5
- b) Electroporation & microprojectile bombardment method 5

OR

Write short notes on:

- c) Particle gun method. 2½
- d) Microinjection 2½
- e) Silicon carbide mediated 2½
- f) Use of DNA / gene transfer by Electric use 2½

2. Write on -

- a) What is indirect method of gene transfer? Describe agrobacterium mediated Gene transfer 5
- b) What is mean by Repoter gene? Describe lux gene and GFP. 5

OR

Write short notes on:

- c) Vir genes 2½
- d) Selectable marker 2½
- e) GUS 2½
- f) Luciferase 2½

3. Write on:

- a) What is mean by transgenic crop? Describe with respect to soybean and rice. 5
- b) Describe the detailed account for Bt-cotton 5

OR

- c) Herbicide Resistant plant 2½
- d) Golden Rice 2½
- e) Moondust carnations 2½
- f) Applications of plant Biotechnology 2½

4. Write on:

- a) Give detailed applications on Application of plant Biotechnology 5
- b) Give detailed accounts on bioethics 5

OR

Write short notes on:

- c) Edible vaccines, 2½
- d) Biodegradable plastic 2½
- e) Chloroplast transformation 2½
- f) Biosafety 2½

5. Write on the following in two or three lines only for **any ten** (Diagrams are not necessary) 10

- a) Direct gene transfer
- b) PEG
- c) Silicon Carbide
- d) T-DNA
- e) Opine
- f) Reporter gene
- g) Cry gene
- h) Glyphosate
- i) Pro – vitamin A
- j) HBSAg
- k) GM food & GM Crops
- l) Edible vaccines
