

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

P. Pages : 2

Time : Three Hours



GUG/S/23/13332

Max. Marks : 50

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

1. Write Notes on:

- a) Write a notes on gun Bombardment method. 5
- b) Define transgenic crops and write a short note on it. 5

OR

Write short notes on:

- c) Write about different step involved in development of transgenic plants. 2½
- d) Write advantages and disadvantages of microinjection. 2½
- e) Electroporation. 2½
- f) Write advantage and disadvantage of silicon carbide mediated gene transfer method. 2½

2. Write notes on:

- a) Write a note on organization of Ti Plasmid of agrobacterium. 5
- b) Explain in detail about process of Agrobacterium mediated gene transfer technique. 5

OR

Write short notes on:

- c) Vectors Antibiotic Resistant Gene. 2½
- d) Write note on herbicide resistance genes as marker. 2½
- e) GFP as marker. 2½
- f) Luciferase gene as marker. 2½

3. Write notes on-

- a) Write a note on production of herbicide resistant plants (Roundup Ready). 5
- b) Write in detail about production of Bt cotton. 5

OR

Write short notes on:

- c) Advantages & disadvantages of Bt cotton. 2½
- d) Golden rice. 2½
- e) Advantages and disadvantages of Roundup Ready Soyabean. 2½
- f) Moon dust carnation. 2½

4. Write notes on:

- a) Production of edible vaccine. 5
- b) Chloroplast transformation. 5

OR

Write short notes on-

- c) Advantages and disadvantages of Edible vaccine. 2½
- d) Biosafety levels. 2½
- e) Polyhydroxybutyrate (PHB) 2½
- f) Ethics in Biotechnology. 2½

5. Write answers to **any ten** question in one or two lines.

- a) Gene Gun. 1
- b) Direct gene transfer. 1
- c) Transgene. 1
- d) T-DNA. 1
- e) Vir region. 1
- f) Reporter gene. 1
- g) Bacillus thuringiensis. 1
- h) Daffodil Plant. 1
- i) β carotene. 1
- j) Containment. 1
- k) Plastome. 1
- l) Cartagena Protocol. 1
