

U. G. 6th Semester Examination 2022

BOTANY (Honours)

Paper Code : DC-14

[CBCS]

Full Marks : 25

Time : Two Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any *five* of the following: 1×5=5
 - (i) What is totipotency?
 - (ii) Give the full form of YAC and BAC.
 - (iii) Give an example of an industrial enzyme used in the food industry.
 - (iv) What is fusogen?
 - (v) What is an artificial chromosome?
 - (vi) Write the full form of PEDC?
 - (vii) What is the locus of *iaaM* gene?

2. Answer any *four* of the following: 3×4=12
 - (i) Write a short note on pBR322.
 - (ii) What is germplasm? Mention the importance of germplasm.
 - (iii) Define protoplast fusion. Mention the importance of protoplast fusion.
 - (iv) What is meristem culture ? Write its importance in the production of the haploid plant.
 - (v) Write with examples of herbicide resistance transgenic plants.
 - (vi) Define restriction endonuclease. Mention the role of Type I and Type II RE.
 - (vii) Explain in brief the *Agrobacterium*-mediated gene transfer.

[P.T.O.]

3. Answer any *one* of the following:

8×1=8

- (i) What is cDNA library? Explain the steps in the construction of the cDNA library. Write down the importance of it. 1+4+3
- (ii) What is a synthetic seed? Describe the procedure of synthetic seed production. Mention the importance of synthetic seeds. 1+4+3
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