Total No. of Printed Pages—3

6 SEM TDC BOTH (CBCS) C 14

2023

(May/June)

BOTANY

(Core)

Paper : C–14

(Plant Biotechnology)

Full Marks : 53
Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following questions : 1×5=5

(a) Define callus.

(b) What is synthetic seed?

(c) Define androgenesis.

(d) What is edible vaccine?

(e) Who coined the term 'biotechnology'?

2. Write briefly on any *five* of the following : 2×5=10

(a) Cryopreservation

(b) Recombinant DNA

(c) Phagemid

(d) Shuttle vector

(e) Golden rice

(f) Humulin

3. Write short notes on any *four* of the following : 5×4=20

(a) Composition of MS medium

(b) Role of growth regulators in tissue culture

(c) Biological role of restriction enzyme

(d) Properties of a good cloning vector

(e) Lambda phage

(f) Tissue culture media

4. Define transgenic crop. Discuss about the approaches to improve quality traits in transgenic crops. 1+7=8

Or

Describe about the electroporation and microprojectile bombardment method of gene transfer. 4+4=8

5. Describe the method of protoplast isolation. Also discuss two strategies used for the selection of hybrid protoplast. 5+5=10

Or

What do you mean by gene cloning? Discuss in detail any two methods of construction of genomic library. 2+8=10

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