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6 SEM TDC BOTH (CBCB) 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'?

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(Turn Over)

(2)

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

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(Continued)

(3)

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
