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MAF-770

Seat No. _____

B. Sc. (Biotechnology) (Sem. V)
Examination

October / November - 2018

CC-I-9 : Principles of Biotechnology
Applied to Plants : Paper - 503

Time : 3 Hours]

[Total Marks : 70

1 Attempt all question : **1×15=15**

- (1) Isolation of protoplast from tissue `?
(A) Vascular (B) Meristemic
(C) Mesophyll (D) Epidermis
- (2) First attempted in plant tissue culture
(A) Carrell (B) Gerberg
(C) Harrison (D) Heberlandt
- (3) First isolated plant growth regulator
(A) IAA (B) IIA
(C) IBA (D) NAA
- (4) Plant cells staining
(A) Typan blue (B) Acid fast
(C) Latin blue (D) Conga blue
- (5) Virus resistant developed method
(A) Coat protein (B) Antisense RNA
(C) Satellite RNA (D) All
- (6) Expand PEG _____
- (7) _____ and _____ are examples of plants vectors.
- (8) Serum should be sterilized by _____
- (9) _____ and _____ examples of insect resistant plants.
- (10) _____ and _____ are types of cell suspension culture.

(11) Match the following :

- | | |
|----------------------|---------------------|
| (1) Media | (a) Kin |
| (2) Cytokinins | (b) 2,4-D |
| (3) Cryopreservation | (c) White's |
| (4) Auxin | (d) Sorbitol |
| (5) Osmoticum | (e) Liquid nitrogen |

2 Attempt any **five** questions : **3×5=15**

- (1) Define cell suspension and types.
- (2) Describe transgenic plants with example.
- (3) Define synthetic seeds.
- (4) Explain cryopreservation.
- (5) Draw a diagram of Ti-Plasmid.
- (6) Describe plant cell growth curve.

3 Attempt any **four** questions : **5×4=20**

- (1) Describe agro bacterium method
- (2) Explain hybrid and application
- (3) Describe pollen culture and pathways
- (4) Define Gene transfer methods
- (5) Describe totipotency and differentiation.

4 Attempt any **two** questions : **10×2=20**

- (1) Explain protoplast culture- isolation and methods.
- (2) Describe resistant in plants and their types
- (3) Explain germplasm preservation in detail.