

Model Question Paper
Botany-Biotechnology-Part-II
12th Standard

Biology

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

Time : 01:00:00 Hrs

Total Marks : 75

5 x 1 = 5

Part-A

- 1) Pseudomonas putida is a engineered bacterium that can
(a) produce a hormone (b) produce a antibiotic (c) digest crude oil slick (d) pollute the soil
- 2) The inherent potential of any living plant cell to develop into entire organism is called
(a) differentiation (b) organogenesis (c) morphogenesis (d) totipotency
- 3) The function of cytokinin is to increase
(a) cell elongation (b) fruit initiation (c) cell division (d) differentiation
- 4) By the application of tissue culture, one important product is formed
(a) artificial synthetic seeds (b) many seeded fruit (c) triploid endosperm (d) induction of flowers
- 5) The two protoplasts are fused with a fusogen called
(a) polyethylene glycol (PEG) (b) Polyvinyl chloride (PVC) (c) Polyethane glycol (PEG) (d) Phosphoric ethane

Part-B

- 6) Define splicing.
- 7) What is gene gun method of delivery of DNA?
- 8) Give the binomials of atleast two dicot transgenic plants.
- 9) Define callus.
- 10) What is a somatic embryo?

5 x 3 = 15

Part-C

- 11) Give a brief account of herbicide resistance in transgenic plants.
- 12) How are foreign genes introduced into the plants (or) Explain electro poration and gene gun methods in plants.
- 13) What are the major procedure for rearing callus growth?
- 14) Briefly mention the basic concept involved in plant tissue culture.
- 15) Write a short account of the origin of tissue culture.

5 x 5 = 25

Part-D

- 16) What will be the role of SCP to safeguard against human protein deficiency for the future?
- 17) Discuss the basic techniques of plant tissue.
- 18) With the help of diagram, Describe the process of protoplasmic

3 x 10 = 30
