

C 80144

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2015

(UG-CCSS)

Core Course—Biotechnology

BT6 B01—PLANT BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions. Answer *all* questions :

1 The plasmid present in *Agrobacterium rhizogenes* is :

- | | |
|-----------------|------------------|
| (a) Ti plasmid. | (b) R plasmid. |
| (c) Ri plasmid. | (d) Col plasmid. |

2 Most commonly used carbon source in plant tissue culture :

- | | |
|---------------|--------------|
| (a) Sorbitol. | (b) Glucose. |
| (c) Fructose. | (d) Sucrose. |

3 The technology used to develop FLAVR SAVR Tomato :

- | | |
|--------------------|----------------|
| (a) Antisense RNA. | (b) Ribozyme. |
| (c) Si RNA. | (d) Micro RNA. |

4 The enzyme used for isolation of protoplast :

- | | |
|-----------------|----------------|
| (a) Macerozyme. | (b) Proteases. |
| (c) Lipases. | (d) Amylases. |

5 Which among is a surface sterilant ?

- | | |
|--------------------------|-----------------------|
| (a) Calcium chloride. | (b) Sodium sulphate. |
| (c) Sodium hypochlorite. | (d) Calcium sulphate. |

6 Which one is natural cytokinins ?

- | | |
|----------|-------------|
| (a) BAP. | (b) IAA. |
| (c) IBA. | (d) Zeatin. |

State True or False :

7 IAA is a natural auxin used for root induction.

8 The most commonly used plant vector is Baculovirus.

9 Colchicine is used for chromosome doubling.

10 Fusion of plant protoplast sucrose is used as fusogen.

Turn over

11 Pomato is a somatic hybridization of potato and tomato.

12 Skoog is known as father of plant tissue culture.

(12 × ¼ = 3 wei

II. Short Answer Type Questions. Answer *all* nine questions :

13 Chemostate.

14 Artificial seed.

15 Cytokinins.

16 P. Maheshwari.

17 Histogenesis.

18 Endosperm culture.

19 Embryo rescue.

20 Methods to test viability of protoplasm.

21 Macerozyme.

(9 × 1 = 9 wei

III. Short Essay. Answer any *five* questions :

22 Give an account on application of cultured protoplast.

23 Explain different methods to develop homozygous diploid.

24 Give a note on plant tissue culture in industry.

25 Explain the technology of transgenic tomato.

26 Discuss about germ plasm conservation.

27 What is somatic embryo ? Explain different stages of somatic embryo.

28 Micropropagation is a cloned propagation. Justify your answer.

(5 × 2 = 10 wei

IV. Long Essay. Answer any *two* questions :

29 Write an essay on different gene transfer mechanisms in plant.

30 Discuss about transgenic plants in crop improvement.

31 Describe briefly various types of in vitro plant cultures.

(2 × 4 = 8 weigl-