

Third Year B.Sc., Degree Examinations

September/October 2015

(Directorate of Distance Education)

BOTANY

DSC 291 : Paper IV : Plant Physiology, Plant Breeding and Tissue Culture

Time: 3 hrs.]

[Max.Marks:75/85

- Instructions :*
- 1. Students who have attended 25 Marks IA Scheme will have to answer for total of 75 Marks.*
 - 2. Students who have attended 15 Marks IA Scheme will have to answer to total of 85 Marks.*
 - 3. One mark questions should be answered in first two pages of the answer book.*
 - 4. Draw neat labelled diagrams wherever necessary.*
 - 5. Question No.V. is compulsory for 85 marks scheme.*

I. Simple answer questions.

Answer in a word, or a phrase or a sentence.

10X1=10

1. Define D.P.D.
2. What is trophic movement ?
3. Name the two weedicide.
4. Define plasmolysis.
5. What is Bud grafting ?
6. What are quantasomes ?
7. Define Photoperiodism.
8. Expand M.S. Media.
9. Name the father of Green Revolution in India.
10. What is Totipotency ?

II. Short answer questions.

Answer any FIVE of the following.

5X3=15

11. Mention the significance of tissue culture.
12. Define Hypertonic, Isotonic, Hypotonic solution.
13. Write a note on law of limiting factor.
14. What is Emasculation? Explain forceps method.

Contd...2

15. Explain dry sterilization.
16. Describe TCT theory.
17. Write a note on Kinetin and Zeatin.

III. Medium answer questions.

Answer any FIVE of the following.

5X6=30

18. Explain significance of plant breeding.
19. Explain Hybridization Technique.
20. Mention the importance of Phytohormones in Tissue culture.
21. Explain the practical applications of auxin.
22. Describe Münch Hypothesis.
23. Write a note on carrier ion concepts.

IV. Long answer questions.

Answer any TWO of the following.

2X10=20

24. Explain non cyclic and cyclic photophosphorylation.
25. Describe Krebs cycle.
26. Explain the importance of macronutrients.
27. Compare the mass selection and pure line selection.

V. Compulsory question for 85 Marks scheme only.

Answer any ONE of the following.

1X10=10

28. What is transpiration? Explain the mechanism of opening and closing of stomata.
29. Describe the preparation of MS -Media.
