D 91636 **(Pages : 2)** **Name.....**

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2015

(CUCSS)

General Biotechnology

GB 3C 3—PLANT BIOTECHNOLOGY

Time : Three Hours Maximum : 36 Weightage

Section A

Answer **all** *questions.*
Each question carries 1 weightage.

1. Embryo rescue.

2. Meristem culture.

3. Diplodization.

4. Protease inhibitors.

5. B^5 medium.

6. Molecular farming.

7. Surface sterilants.

8. FLAVAR SAVAR tomato.

9. Hairy root culture.

10. Cryoprotectant.

(10 x 1 = 10 weightage)

Section B

Answer any **seven** *questions.*
Each question carries 2 *weightage.*

11. Somaclonal and gametoclonal variation.

12. Production and application of artificial seed.

13. Discuss the various growth regulators used in plant tissue culture and their specific functions.

14. Describe embryo, ovary, ovule culture and their applications.

15. What are slow growth cultures ? Explain their applications.

16. Explain direct and indirect organogenesis and discuss the factors effecting organogenesis.

17. What are possible methods to increase the shelf life of fruits ?

18. Discuss about strong and specific plant promoters.

19. Explain the structure and function of cry and PR proteins.

20. Give a brief account on mutational breeding in plant tissue culture.

(7 x 2 = 14 weightage)

Turn over

Section C

Answer any **two** *questions.*
Each question carries 6 *weightage.*

21. Describe different methods to create transgenic plants.

22. Discuss the applications of plant transformation with specific examples.

23. Explain the role of different bioreactors in plant secondary metabolite production.

(2 x 6 = 12 weightage)