D 22582 (Pages : 2) Name.....

Reg. **No.....**

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2012

(CUCSS)

Biotechnology

GB 3C 3—PLANT BIOTECHNOLOGY

(2010 Admissions)

Time : Three Hours Maximum Weightage : 36

Section A

Answer **all** *questions.*

1. Write the advantage and disadvantage of using mercuric chloride as a surface sterilant.
2. How cytokinins influence the in vitro growth of callus ?
3. What is gameto clonal variation ?
4. What is gene bank ?
5. Write the significance of Ri plasmid.
6. What do you mean by vitrification ?
7. W^1 is disarmed T DNA ?
8. How δ-endotoxin is important in plant genetic engineering ?
9. Comment on B5 medium.
10. What is precocious germination ?

(10 x **1** = 10 weightage)

Section B

Answer any **seven** *questions.*

11. Briefly discuss the applications of micropropagation.
12. How synseeds are produced ?
13. Discuss the factors affecting seed-set after in vitro pollination.
14. How induced mutations are produced ?
15. What are immobilized plant cells write down the applications ?
16. Explain the growth of plant cells in suspension culture.
17. Describe the particle-gun method for gene transfer.
18. With the help of diagrams, explain the role and formation of binary and co-integrate vectors
19. How genetic engineering is useful in improving herbicide resistance ? Explain showing examples.
20. Discuss somaclonal variation.

(7 x 2 = 14 weightage)

Turn over

Section C

Answer any two questions.

21. **Compare the strategies and applications of haploid and triploid production.**

22. **Discuss the in vivo methods for germplasm conservation. How it is different from in vitro methods ?**

23. **Describe the production methods for heterokaryons. How they are selected and discuss the applications ?**

(2 x 6 = 12 weightage)