

## SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2012

(CCSS)

Microbiology – Elective

MB 6B 21 (E2) – CELL AND TISSUE CULTURE

Time : Three Hours

Maximum : 30 Weightage

## Part A

*Answer all questions.*

1. Expand NAA.
2. cDNA is prepared from \_\_\_\_\_
3. Agar is
  - (a) Nutrient.
  - (b) Solidifying agent.
  - (c) Enzyme.
  - (d) Carbon source.
4. A callus is \_\_\_\_\_
5. Expand PEG.
6. Ti plasmid is used for \_\_\_\_\_
7. Use of gene gun is \_\_\_\_\_
8. MS medium is used for \_\_\_\_\_ culture.
9. Haploidy is \_\_\_\_\_
10. Protoplasts are \_\_\_\_\_
11. Enzyme used in protoplast isolation.
12. \_\_\_\_\_ is used for production of virus free plants.

(12 x 3 = 36 weightage)

## Part B

Comment on :

- |                      |                               |
|----------------------|-------------------------------|
| 13. Cell lines.      | 14. Secondary metabolites.    |
| 15. Cytokines.       | 16. Primary cell lines.       |
| 17. Callus.          | 18. Surface sterilisation.    |
| 19. Inoculation.     | 20. Factors affecting growth. |
| 21. Somatic hybrids. |                               |

(9 x 4 = 36 weightage)

Turn over

**Part C**

*Write briefly on any **five** of the following.*

*Answer not to exceed **one page**.*

22. Somaclonal variations.
23. Pollen culture.
24. Seedless Plants and its production.
25. Androgenesis.
26. Virus free plants.
27. Synthetic seeds.
28. Gene transfer methods.

(5 x 2 = 10 weightage)

**Part D**

*Answer any two of the following.*

29. Applications of tissue culture.
30. Different types of cultures.
31. Testing viability of cells.

(2 x 4 = 8 weightage)