

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 $\frac{1}{4}$ = 3 **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 1 = 9 **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**)