

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**

**(For candidates admitted during the academic year 2009-10)**

**SUBJECT CODE: BY/PC/AP24**

**M. Sc. DEGREE EXAMINATION, APRIL 2010**

**BIOTECHNOLOGY  
SECOND SEMESTER**

**COURSE : MAJOR CORE**  
**PAPER : ANIMAL AND PLANT BIOTECHNOLOGY**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL THE QUESTIONS**

**(20 x 1 = 20)**

**Define / Explain the following:**

1. Protoplast
2. Cell lines
3. Tissue specific promoters
4. Cell count and cell viability
5. Golden rice
6. Filter sterilization
7. Plantibodies
8. Serum free media
9. Ri Plasmid
10. Cryopreservation
11. Cry gene
12. DNA vaccines
13. Binary vectors
14. MTT
15. Haploids
16. Embryo splitting
17. Tissue typing
18. Plant Biotechnology
19. Transgenic fish
20. Octopine

**SECTION – B**

**ANSWER ANY FOUR QUESTIONS IN ABOUT 600 WORDS (4x 10 = 40)**

21. Describe various methods of transformation of animal cells.
22. What is IVF? How is it used for the production of transgenic cattle?
23. Write a note on animal tissue culture media. Explain the various methods of media sterilization.
24. Give an account of molecular farming of proteins.
25. Discuss development of Bt crops and give their disadvantages
26. Give an account of the various reporter genes used in plant transformation studies.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS IN ABOUT 1500 WORDS (2x 20 = 40)**

27. What is primary cell culture? Explain in detail the production of primary cell culture. Differentiate primary and secondary cell cultures.
28. Write a detailed note on transgenic animals. Give an account on the potential applications of transgenic animals.
29. Plants are used as bioreactors - With an example explain the production of foreign proteins in seeds.
30. Explain the production of transgenic plants and their impact on the environment with an example of herbicide resistance.

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