STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11ZL/ME/AT53

B.Sc. DEGREE EXAMINATION NOVEMBER 2014
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR ELECTIVE
PAPER : ANIMAL TISSUE CULTURE TECHNIQUES
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION- A

ANSWER ALL QUESTIONS **(10x3=30)**

1. Give the function of:
   a) Working cell bank b) Trypan blue staining c) Cell culture medium
2. Distinguish between:
   a) Lag phase and exponential growth phase
   b) Doubling time and population doubling time
3. Comment on Trypsinisation.
4. Write notes on:
   a) Coulter counter b) Cryopreservation c) Mycoplasma eradication
5. Define: Hayflick limit
6. Illustrate: Haemocytometer.
7. Describe: Primary cell culture.
8. What is the role of a laminar flow hood?
9. Illustrate: Optical Microscope.
10. List: Commonly used cell lines.

SECTION- B

ANSWER ANY FIVE QUESTIONS **(5x6=30)**

11. What is a primary culture? Describe the types of primary culture.
12. Describe the significance and composition of animal serum used in cell culture.
13. List out the essential physico-chemical properties of tissue culture media.
14. Elaborate on the viable cell count method using Haemocytometer.
15. Discuss on the various sterilization methods of culture media.
16. Give the design of a Tissue Culture lab.
17. List out the various types of biochemical and in vivo imaging techniques of cells in Tissue Culture.

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SECTION-C

ANSWER ANY TWO QUESTIONS **(2x20=40)**

18. Give a detailed account of cryopreservation in Tissue culture.
19. Elaborate on cell lines, their maintenance and types.
20. Describe the culture of Lymphocytes from blood.
21. List out the applications and limitations of Tissue Culture.

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