

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086**  
**(For Candidates admitted during the academic year 2008 - 09)**

**SUBJECT CODE: ZL/ME/BM54**

**B.Sc. DEGREE EXAMINATION NOVEMBER 2010**  
**BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY**  
**FIFTH SEMESTER**

**COURSE : MAJOR ELECTIVE**  
**PAPER : BIOMEDICAL INSTRUMENTATION AND TECHNIQUES**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

**SECTION-A**

**Answer All Questions**

**(10x3 =30)**

1. Write the principle of fluorescence microscopy.
2. What is FISH technique?
3. What is the principle of gas chromatography?
4. What is auto analyser?
5. What is the significance of RFLP?
6. What is the use of a scintillation counter?
7. What is an accelerator machine?
8. Write a note on Homogenization.
9. How does a kidney machine work?
10. Name the different types of electrical protection devices.

**SECTION- B**

**Answer Any Five Questions**

**(5X6=30)**

11. Briefly explain the principle and working of phase contrast microscopy.
12. Explain flow – cytometry.
13. Write notes on Thin Layer Chromatography.
14. Write about ultrasonic imaging and their significance in diagnosis.
15. Give a brief account of biomedical recorders.
16. Write notes on X- ray diffraction techniques.
17. Discuss on the radiation safety instruments.

**SECTION- C**

**Answer Any Two Questions**

**(2X20 =40)**

18. Explain in detail the working of electron microscopy and how does it differ from light microscopy?
19. Enumerate on the principle and mechanism of Gel Electrophoresis and immunoelectrophoresis.
20. Write an essay on the principle and types of centrifuge.
21. Write short notes on
  - a) Pace makers
  - b) DNA – finger printing

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