

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086
(For candidates admitted during the academic year 2009 – 10 & thereafter)

SUBJECT CODE: BY/PC/IN44

M. Sc. DEGREE EXAMINATION, APRIL 2012
BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : CORE
PAPER : INSTRUMENTATION
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL THE QUESTIONS

(10 x 2 = 20)

Define / Write about

1. Weak acids
2. Buffer
3. pH
4. Bases
5. Colorimeter
6. Beer & Lamberts Law
7. Svedberg Constant
8. Ultracentrifugation
9. Isotopes
10. Half – life
11. Autoradiography
12. Kd
13. Electrophoresis
14. Partition Chromatography
15. Adsorption Chromatography
16. Bisacrylamide
17. Resolving power
18. TEM
19. Isotachopheresis
20. Radiation Units

SECTION – B

ANSWER ANY 4 QUESTIONS IN ABOUT 600 WORDS

(4 x 10 = 40)

21. Derive HH equation and state its applications
22. Write about the principle of spectrophotometer and explain the instrumentation
23. Explain in detail about Ion- exchange chromatography
24. Account on SEM
25. Discuss in brief about HPLC
26. Elaborate on the applications of radioactive isotopes in biology

SECTION – C

ANSWER ANY TWO QUESTIONS IN ABOUT 1500 WORDS

(2 x 20 = 40)

27. Describe in detail about the density gradient and differential centrifugation
28. Discuss about Scintillation counter
29. Explain the techniques Gel filtration and Affinity chromatography
30. Discuss in detail about Agarose gel electrophoresis and PAGE
