

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

SUBJECT CODE: 11BY/PC/IM34

M. Sc. DEGREE EXAMINATION - NOVEMBER 2014
BIOTECHNOLOGY
THIRD SEMESTER

COURSE : CORE

PAPER : IMMUNOTECHNOLOGY

TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS:

(20 x 1 = 20)

DEFINE / EXPLAIN THE FOLLOWING.

1. Define Clonal selection Theory.
2. Opsonins
3. Interferons
4. Mitogens
5. Define Adjuvants and its types with examples.
6. Haptens
7. ELISA – principle
8. Mast cells
9. Abzymes
10. Toxoids
11. Monoclonal antibodies
12. Fc region
13. Antibody dependent cell mediated cytotoxicity.
14. IgM
15. Anaphylatic reactions
16. Double – Immunodiffusion
17. Major histocompatibility
18. Active immunization
19. Chimeric Antibodies
20. Integrins

SECTION – B**ANSWER ANY FOUR QUESTIONS.****(4 x 10 = 40)**

21. Explain the characteristic features and classification of Antigens.
22. Describe the primary structure of an antibody. Add note on the functional features of IgA & IgG.
23. Describe the anatomical location and its structure of the primary lymphoid organs.
24. Explain the basic concepts involved in auto – immune diseases. Add notes on the types and diseases associated with these.
25. Explain the immune responses with bacterial and parasitic infections.
26. Enumerate the properties, functions and receptors of cytokines.

SECTION – C**ANSWER ANY TWO QUESTIONS.****(2x20 = 40)**

27. What are polyclonal antibodies? Explain the process of production and application of monoclonal antibodies by hybridoma technology.
28. Enumerate the principles and strategies involved in the preparation of vaccine.
Explain the process of preparation of recombinant – vector vaccine and advantages of DNA vaccines.
29. Explain the various pathways by which complements are activated during immune response.
30. Describe the principle involved in ELISA and RIA. Add notes on the various types of ELISA.
