

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

(For candidates admitted during the academic year 2008 – 09)

**SUBJECT CODE: BY/PC/IM35**

**M. Sc. DEGREE EXAMINATION, NOVEMBER 2009**

**BIOTECHNOLOGY**

**THIRD SEMESTER**

**COURSE : CORE**  
**PAPER : IMMUNOLOGY**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

**SECTION – A**

**ANSWER ALL QUESTIONS: (20 x 1 = 20)**

**DEFINE / EXPLAIN THE FOLLOWING. EACH IN ABOUT 50 WORDS.**

1. M-Cells
2. C-reactive protein
3. Forssman antigen
4. Anamnesis
5. Opsonin
6. Haplotype
7. Myeloma
8. Lymphocyte clones
9. HLA
10. Proteosomes
11. Single positive thymocyte
12. Interferon  $\gamma$
13. Allergen
14. Phytohemagglutinin
15. Lymphotoxin
16. Mixed lymphocyte reaction
17. HAT medium
18. Regulatory T-Lymphocytes
19. Adjuvants
20. Passive immunization

**SECTION – B**

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

21. Describe the structure of lymph node and explain its immune functions.
22. Highlight various methods of classification of antigens.  
Add a note on their advantages
23. Discuss the types of antibody variants and their immunologic significance.
24. Explain the mechanisms of interaction between antigen and antibody.
25. What is FACS? Explain its principle and applications.
26. Elucidate the desirable features of a vaccine.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS. EACH IN ABOUT 1500WORDS :( 2x20 = 40)**

29. 'Innate and adaptive immunity represent the two arms of immune system'– Justify.
28. Discuss the immunologic significance of MHC
29. Explain the important functions of IgM and IgG
30. Give a detailed account on preparation of any four types of vaccines.  
Add a note on their merits and limitations.

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