LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **PLANT BIOLOGY & PLANT BIO-TECH.**

FIFTH SEMESTER – **NOVEMBER 2013**

PB 5406 - IMMUNOLOGY AND IMMUNOTECHNOLOGY

Date : 18/11/2013 Dept. No. Max. : 100 Marks
Time : 9:00 - 12:00

PART A

Answer the following, each within 50 words **(10 x 2 = 20)**

1. Mention the contribution of Edward Jenner.
2. What is the role of the thymus?
3. Define active immunity.
4. What are lymphocytes?
5. Define toxoid and its uses.
6. What are granulocytes?
7. Define the term 'epitope'.
8. Mention the significance of precipitation reactions.
9. What are polyclonal antibodies?
10. What is meant by hybridoma?

PART B **(5 x 7 = 35)**

Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary:

11. (a) Write short notes on adaptive immunity.

Or

(b) Write briefly on the history of immunology.

12. (a) Describe the structure of antibody with diagram.

Or

(b) What is antigen? Cite the factors that contribute to antigenicity?

13. (a) What is agglutination? Describe the process of blood grouping.

Or

(b) Write the principle and process of immunoelectrophoresis.

14. (a) Describe the MHC I pathway of antigen processing and presentation.

Or

(b)What is complement? Explain the alternative pathway.

15. (a) List the nature and applications of monoclonal antibodies.

Or

(b) Discuss the principle and production of antiserum.

PART C **(3 x 15 = 45)**

Answer <u>any three</u> of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary.

16. Give a detailed account on the various cells of the immune system.
17. What are antibodies? Discuss the various classes and their distribution.
18. Describe the principle and process of complement fixation and Western blot.
19. Write in detail on the primary and secondary lymphoid organs.
20. Give an account on the production and HAT selection of hybridoma cells.

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