

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore – 641 043**

Master's Degree Examination – November 2017

III Semester

**Class : II PG
Major : Biochemistry/Biotechnology**

**Time: 3 hours
Max. Marks: 60**

12MBCC14/12MBTC14 Immunology and Immunotechnology

Part A

Choose the correct answer

10 x 1/2 = 5

1. Father of immunology is -----
a. Edward Jenner b. Louis Pasteur c. Langerhans d. Bordet
2. Embryonic stem cells are isolated from the inner cell mass of -----
a. Trophoblast b. Trophoectoderm c. Morula d. Blastocyst
3. Transfer of Ig G from mother to fetus through placenta is an example of ----- immunity
a. Innate b. Active c. Natural Passive d. Artificial Passive
4. The enzyme involved in the effector mechanism of cellular immunity is -----
a. Apozyme b. Proenzyme c. Granzyme d. Nuclease
5. Patch test relies on the principle of type ----- hypersensitivity reaction.
a. I b. II c. III d. IV
6. ----- is a multisystem autoimmune connective tissue disorder
a. Pernicious anemia b. SLE c. Graves disease d. Rheumatoid arthritis
7. Class switching in humans is modulated by -----
a. Th1 b. Th3 c. Th5 d. Th7
8. Nonclassical MHC-Ib are -----
a. Recognized by TCR b. Non polymorphic c. Polymorphic d. Recognized by LILR
9. The most widely used method for analyzing the expression of cell surface molecules is -----
a. Flow cytometry b. Immunofluorescence c. RIA d. ELISA
10. ----- is the first aluminium salt used as an adjuvant
a. Aluminium Chloride b. Aluminium hydroxide c. Alum d. Aluminium phosphate

Part B

5 x 4 = 20

Answer ALL questions

Answer should not exceed 200 words or one page

- 11.a. Discuss on the structure and functions of Thymus?
(Or)
- 11.b. Define haptens and mitogens?
- 12.a. Write a short note on Innate immunity?
(Or)
- 12.b. List out the differences between humoral and cell mediated immune response?
- 13.a. Characterize the diagnosis and treatment of hypersensitivity?
(Or)
- 13.b. How are autoimmune diseases diagnosed and treated?
- 14.a. Enumerate on the theories of antibody formation?
(Or)
- 14.b. Elucidate on immunosuppressive therapy?
- 15.a. Give the principle and technique of immune electrophoresis and immune blotting?
(Or)
- 15.b. Provide the principle of vaccine production? What are the vaccines under development?

Part C

5 x 7 = 35

Answer ALL questions

Answer should not exceed 600 words or three pages

- 16.a. Describe about the structure, functions and properties of the different types of immunoglobulins?
(Or)
- 16.b. Explicate about the classical and alternative pathways of Complement?
- 17.a. Elaborate on immune response to bacterial and viral infections?
(Or)
- 17.b. Explain primary and secondary immunodeficiency diseases with examples?
- 18.a. Sketch out the types of hypersensitivity reactions? Explain Type I and Type II reactions?
(Or)
- 18.b. Discuss on Myasthenia gravis and Rheumatoid arthritis?
- 19.a. Give a detailed note on the organization, structure and functions of MHC and HLA?
(Or)
- 19.b. Report on the different types of grafts? Give the mechanism of transplantation rejection?
- 20.a. Give a detail note on the principle, technique and applications of RIA and ELISA?
(Or)
- 20.b. Elucidate on the production and applications of monoclonal antibody ?
