

B.Sc. Biotech Part I Examination, 2016

Faculty of Science

(Immunology)

Time: 3 Hours

Maximum Marks: 50

Note: Question 1 is compulsory, Attempt five questions in all, selecting at least one question from each section.

Q1. Fill in the blanks:

- i) Antigen presenting cell deliver asignal tocells.
- ii) In direct elisa, we detectand in indirect ELISA, we detectin serum.
- iii) Antibodies that aggregate soluble antigens are called.....
- iv) Anis a substance which enhance the immunogenicity of Ag.
- v) Immediate hypersensitivity usually involves
- vi) Radioimmunoassay first developed byfor estimation ofin serum. It can estimate quantities as low as
- vii) Genes coding MHC are present on human chromosome number.....these genes have many.....forms.
- viii) Horse radish peroxidase is used in
- ix) Life span of plasma cell is and life span of memory cell is.....
- x) Smallest unit of Ag binds with Ab is called.....and conjugated hapten behave as

Section A

Q2. Describe the mechanism of humoral and cell mediated immunity?

Q3. What is innate immunity? Describe in detail different non specific host defense of human body?

Section B

Q4. Write in detail about the Ab classes and their biological activity?

Q5. Write short notes on any two:

- i) T cell receptor
- ii) Inflammation
- iii) Granulocytic cells

Section C

Q6. How does the activation of the complement system take place? Describe its function and regulation?

Q7. Write short note on:

- i) Cytotoxic T cell
- ii) Antibody dependent cell mediate cytotoxicity

Section D

Q8. Write about the mode of viral infection. give an account of innate and adaptive or specific response to viral infection?

Q9. Give a comprehensive account of tissue transplantation and immunosuppression?

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Q1. Give short answer of the following:

- i) Define Ag –Ab interaction
- ii) What are autoimmune disease
- iii) Precipitation of Ag AB complexes occurs because of Ab molecules cross link Ag to form a
- iv) Macrophages are named as
A) In liver B) in connective Tissue C) in Brain D) in Bone
- v) Give any three clinical manifestation of IgE mediated Hypersensitivity?

Section A

Q2. Write about cellular component of the immune system?

Q3. Write short notes on any two:

- i) Innate Resistance by mucous membrane
- ii) Lymphatic system
- iii) Ag processing and presentation

Section B

Q4. What are different protective role of Ab's in humoral immunity?

Q5. Write short notes on any two:

- i) Western blotting and ELISA
- ii) B & T cells
- iii) General structure & function of MHC class I & class II

Section C

Q6. What are cytokines? Write about their properties structure and outline functional classification?

Q7. What is hypersensitivity? Describe type II and delayed type of hypersensitivity?

Section D

Q8. What is Graft rejection? Give mechanism and prevention of Graft rejection?

Q9. Describe autoimmunity? What are autoimmune disorders, what factors predispose such disease?