

B.Sc. DEGREE EXAMINATION NOVEMBER 2011
BRANCH VI.A. –ADVANCED ZOOLOGY AND BIOTECHNOLOGY
THIRD SEMESTER

COURSE : MAJOR CORE
PAPER : IMMUNOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION-A

ANSWER ALL QUESTIONS

(10 X 3 = 30)

1. Fill in the blanks

- a) _____ is the most abundant class of antibody in the serum.
- b) Epitopes are also called _____.
- c) Vaccination is a type of _____ immunity.

2. Choose the correct answer

- a) The first Ig to be produced in response to an infection is
(i) Ig G (ii) Ig M (iii) Ig A
- b) The site of B cell maturation in a foetus that is 8 to 9 weeks old is
(i) Bone marrow (ii) Spleen (iii) Liver
- c) Interleukin is a type of
(i) IFN (ii) Lymphokine (iii) Monokine

3. State true or false

- a) All antigens are immunogens.
- b) Spleen is a systemic lymphoid organ.
- c) Neutrophils play a vital role in immunity against parasitic worms.
- d) AMI is effective against intracellular pathogens.
- e) Transfusion reaction is a type of Type II Hypersensitivity reaction.
- f) Inactivated toxin is called a toxoid.

4. Match the following

- | | |
|-------------------------|---------------------------|
| a) MALT | i) Complement activation |
| b) Allergen | ii) Hyper sensitivity |
| c) Hassall's corpuscles | iii) Peyer's patch |
| d) Arthus reaction | iv) Physiological barrier |
| e) Temperature | v) Mast cell degeneration |
| f) MAC | vi) Thymus |

5. Define

- a) Anemnestic response b) Zeta potential c) Adjuvant

6. Distinguish

- a) Innate and Adaptive immunity
- b) Antigen and Immunogen
- c) Cytokine and Complement

7. Expand

a) MHC b) TNF c) CDR

8. Name any three phagocytic cells
9. Draw a neat labeled diagram of the Spleen.
10. Enlist any three attributes of Adaptive immune response.

SECTION-B**ANSWER ANY FIVE QUESTIONS
(Draw diagrams where necessary)****(5 X 6 = 30)**

11. Discuss the role of Neutrophils and follicular dendritic cells in the immune system.
12. Describe the structure of Thymus.
13. What is transplantation? Enlist the causes of graft rejection.
14. What are cytokines? Enlist their properties.
15. Discuss Type I Hypersensitivity reactions.
16. Outline the Classical pathway of Complement activation.
17. 'Innate immunity constitutes our body's first line of defense'. Justify.

SECTION-C**ANSWER ANY TWO QUESTIONS
(Draw diagrams where necessary)****(2 X 20 = 40)**

18. Describe the structure of the antibody molecule. Add a note on Ig E and Ig A.
19. Discuss the principle and applications of EIA in immunodiagnostics.
20. Discuss immune reaction in parasitic infections.
21. Discuss the use of immune serum in therapy in the context of Anti venom, Anti tetanus and Anti D.
