STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11ZL/MC/IM54

B.Sc. DEGREE EXAMINATION - NOVEMBER 2015
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIFTH 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) A major cytokine involved in preventing the viral spread is called _____.
   b) The smallest unit of antigen is called as _____.
   c) The porcine heart valve transplantation is the typical example of _____.
2. **Choose the correct answer**
   a) Interleukim is a type of
      i. IFN ii. Lymphokine iii. Monokine
   b) The kind of vaccine that needs booster dose is _____.
      i. DNA vaccine ii. Live attenuated vaccine iii. Killed vaccine
   c) A person is infected with the pathogenic bacteria in the intestine. Pick out the innate immune mechanism occurring in the person's body
      i. Complement mediated lysis ii. Interferon production iii. Antibody production
3. **State True or False**
   a) Spleen is involved only in cell mediated immune response.
   b) Idiotypic antigens are antigens of antibody.
   c) The cytokines are stored in granules by the cells secreting them.
   d) Graft versus host disease is the typical example of type III hypersensitivity reaction.
   e) Virus infection induces the production of specific IgA in the mucosa.
   f) Toxoids are used when toxins are more dangerous than bacteria itself.
4. **Match the following**

a) Phagocytic barrier	-	Allergic response
b) Acute graft rejection	-	Granulomatous disease
c) Macrophage	-	Macrophage and Neutrophil
d) Type IV hypersensitive reaction	-	Primary activation of T cells
e) IgE	-	Diphtheria toxin
f) Toxoid	-	TNF

5. **Define**
   a) Dendritic cell b) Hapten c) Arthus reaction

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6. **Distinguish**
   a) Active and Passive immunity
   b) Lymphokines and Monokines
   c) Attenuated and Inactivated Vaccine
7. **Expand**
   a) APCs b) DTH c) MALT
8. Name any three cells involved in destroying viral infected cells.
9. Draw a neat labeled structure of Thymus.
10. Enlist any three immune serum for therapy.

SECTION – B

ANSWER ANY FIVE QUESTIONS (5 x 6 = 30)
(Draw diagrams where necessary)

11. Explain the role of the body's first line of defense in immunity.
12. Highlight the importance of macrophages in immunity.
13. Outline the classification of antigens with suitable examples.
14. Highlight the role of precipitation and agglutination.
15. Explain the role of complement in innate and adaptive immunity.
16. Enumerate the properties of cytokines.
17. Write a note on the various types of transplant.

SECTION – C

ANSWER ANY TWO QUESTIONS (2 x 20 = 40)
(Draw diagrams where necessary)

18. Describe the structure and functions of primary lymphoid organs.
19. Describe the primary structure, classification and functions of antibody.
20. Compare the different types of hypersensitivity reactions.
21. Write an essay on the types of vaccines used in humans.

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