NAM-003-001631 Seat No. _____

Third Year B. Sc. (Sem. VI) (CBCS) Examination

March / April - 2017

Microbiology : Paper - 601

(Immunology & Clinical Microbiology)

(New Course)

Faculty Code : 003

Subject Code : 001631

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All Questions are compulsory.
(2) Right side figure indicate marks of the question.
(3) Draw figures wherever necessary.
(4) Write answers of all the questions in the main answer sheet.

1 Answer specifically : **1×20=20**

(1) Define Passive Natural Immunity.

(2) Define MALT and CALT.

(3) Enlist various mechanisms of Innate immunity.

(4) Define Immunogen and enlist various factors affecting immunogenicity.

(5) What is the chemical nature of immunoglobulins? Who elucidated it?

(6) Enlist various Biological functions of Ig.

(7) Define Monoclonal Antibodies. Name the scientists who developed this concept for the first time.

(8) What do you mean by 'Tri Molecular Complex? What is its importance?

(9) Define Hypersensitivity and enlist its various types.

(10) What factors are responsible for immunodeficiency.

(11) Classify Autoimmune diseases and give one example of each.

(12) What is GVH rejection? Give example.

(13) Define Normal Flora.

(14) Enlist various stages of Host - Microbe interaction.

(15) What are Microbial Virulence Factors? Give examples.

(16) What is Epidemiology? Enlist various epidemiological markers.

(17) What is transport medium?

(18) What is ELISA? Enlist its types.

(19) Define Antibody affinity. What does it indicate?

(20) What precautions are to be taken during blood transfusion process?

2 (a) Answer the following : (any **three**) **2×3=6**

(1) What is Herd immunity? How does it provide protection?

(2) Draw a well labeled diagram of IgG.

(3) What is DiGeorge's syndrome?

(4) State clinical symptoms of Typhoid disease.

(5) What details should be mentioned on the clinical specimen during handling and transportation?

(6) Explain RIA.

(b) Answer the following : (any **three**) **3×3=9**

(1) Explain the role of skin and mucous membrane in body's defense mechanism.

(2) Discuss biological functions of immunoglobulins.

(3) Briefly explain the mechanism of Type - II hypersensitivity.

(4) Discuss pathogenesis and treatment of Meningitis.

(5) Describe in brief various blood groups of human.

(6) Discuss various types of grafts.

(c) Write short notes : (any **two**) **5×2=10**

(1) Organs of Immune system

(2) Classes of immunoglobulins

(3) Immunodeficiency diseases

(4) Host - Microbe interactionship

(5) Agglutination reactions

3 (a) Answer the following : (any **three**) **2×3=6**

(1) What is meant by margination and diapedesis?

(2) What is HAT? What is its function ?

(3) What are tumor antigens? Enlist them.

(4) Write a short account on Normal flora of skin.

(5) Briefly explain the process of Blood coagulation.

(6) Explain immunofluorescence.

(b) Answer the following : (any **three**) **3×3=9**

(1) Explain the generation of primary and secondary immune response.

(2) Discuss structure and function of IgA.

(3) Briefly explain the mechanism of graft rejection.

(4) Discuss pathogenesis and treatment of Amoebiasis.

(5) Describe in brief the mechanism and process of Western blot.

(6) Discuss various types of Autoimmune diseases.

(c) Write short notes : (any **two**) **5×2=10**

(1) Specific immunity

(2) Hybridoma technology

(3) Tumor diagnosis and treatment

(4) Malaria

(5) Methods of identification of microbes in a specimen.
