Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
End Semester Examination: Oct. 2023
Faculty: Science and Technology

Program: BScGen03 **Semester: III** **SET: C**
Program (Specific): S.Y.BSc. Microbiology **Course Type: DSC**
Class: SYBSc **MaxMarks:35**
Name of the Course: Medical microbiology and Immunology.
Course Code: 23-MB-231 **Time: 2Hr**
Paper: I

Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***

SECTION: A

Q1) Attempt the following Questions. **5M**

I)_____ cell produces Antibodies.

a) T cells b) B cells c) NK cells d) Macrophages

II) Show which of the following blood group is very rare?

a) AB b) O c) Bombay d) B

III) Define Vaccines

IV) Explain what an epidemic is.

V) Discuss Cytokines with example.

Q2) Answer any <u>four</u> of the following questions. **4M**

I) Describe reservoirs of infections
II) Describe the process of phagocytosis
III) State the routes of drug administration.
IV) Quote an example of endogenous soluble antigen
V) Relate placenta, IgG, mother and fetus
VI) If fathers blood group is A positive and mothers is O negative then conclude the possible blood groups in children?

SECTION: B

Q3) Answer any <u>four</u> of the following questions **8M**

I) A disease spreads by coughing or sneezing, symptoms include cough with phlegm or pus, fever, chills and difficulty in breathing. Identify the disease, its causative pathogen and name the system it affects.
II) If AB positive person's blood is given to a O positive person, there occurs blood clotting and destruction of RBCs of AB positive blood, why?

III) Define disinfectant and give examples.
IV) Illustrate the cell lineage for T cell.
V) Discuss, MMR is a combined vaccine?
VI) Describe the importance of MHC molecules.

SECTION: C

Q4) Answer any <u>four</u> of the following questions 8M

I) Distinguish between Active and Passive Immunization
II) Summarize the factors affecting Antigenicity
III) Explain Antagonism and synergism in drug administration.
IV) When an antigen enters our body for second time, our body shows immune response more, faster than when it entered for the first time. Justify
V) Discuss diseases associated with Skin.
VI) Define progenitor cell and name the progenitor cells that give rise to Macrophages and B cell.

SECTION: D

Q5) Attempt any two of the following 10M

I) A single cell with Self renewing capacity is present in bone marrow. Give the importance of this cell and explain the process of Hematopoiesis.
II) Compare and contrast Innate and Adaptive immunity
III) Give the scope and definition of epidemiology with one example.
IV) Discuss the methodology of antibiotic sensitivity testing give its applications**.**