



# RAN-1029

## B. Sc. Microbiology Examination

March / April - 2019

Semester-V

MB14: Immunology

Time: 2 Hours ]

[ Total Marks: 50

સૂચના : / Instructions

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

B. Sc. Microbiology Sem-V

Name of the Subject :

MB14: Immunology

Subject Code No.: 1 0 2 9

Seat No.:

--	--	--	--	--	--

Student's Signature

Instructions:

1. Figures to the right indicate full marks of the questions.
2. Draw neat and labeled diagrams whenever necessary.

Que: 1 Give specific answers.

[12]

1. Give a Mathematical Expression of Infection.
2. Define granulocytes. Enlist its types.
3. What is Serotyping? Give its significance.
4. Differentiate between Systemic anaphylaxis and Localized anaphylaxis.
5. Define RIA. Name the scientist who developed this technique.
6. What is Autoimmunity? Give two example of autoimmune disease.

**Que: 2 Explain /justify any two of the following [12]**

1. There are many steps involved in establishing viral pathogenesis.
2. Antigen characteristics are numerous and diverse.
3. Immunohematology is the study of Immune reactions associated with Blood.

**Que: 3 Explain any two of the following in detail [16]**

1. Define Immunoglobulin. Give detail note on structure and functions of immunoglobulin.
2. Discuss the mechanisms by which Exotoxins can damage cells.
3. Explain: Principle, process and application of ELISA.

**Que: 4 Write short notes on any two of the following. [10]**

1. Type III Hypersensitivity.
  2. Viral hemagglutination.
  3. Naturally Vs. Artificially Acquired Immunity.
-