



**NAVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Science
Program/s:
Year: 1st **Semester:** 1st
Examination: End Semester Examination
Examination year: December - 2022

Course Code: LS166 **Course Name:** Immunology: Health and Diseases

Date: 13/12/2022

Time: 08:30 pm to 10:30 pm

Total Marks: 40

Total Pages:

Instructions:

→ Write each answer on a new page.

Q. No.	Details	Marks	COs*	BTL#
Q.1	<p>Answer the following.</p> <ol style="list-style-type: none"> The naturally occurring non-specific defense mechanism against pathogen is known as _____. Macrophage present in kidney is known as _____. The type of antibody found in colostrum, saliva and tears is _____. Naïve T cell activation will be done by _____ cells. Chemically, MHC-1 and MHC-2 molecules are _____ in nature. CD8+ T cells are associated with _____ MHC molecules. The pH of the gel remains different in SDS-PAGE. True / False - Justify. The complete antigen molecule is immunogenic. True / False - Justify. Monoclonal antibody can bind to a single epitope on the antigen. True / False - Justify. Antibodies are generally glycoprotein in nature. True / False - Justify. 	10	CO1, CO2, CO3, CO4, CO5	BT1, BT2, BT3, BT4
Q.2	<p>Do as directed.</p> <ol style="list-style-type: none"> Write the molecular composition of neutrophil granules with functions. Differentiate between active and passive immunity. Discuss primary and secondary immunofluorescence with example. State the role of blocking step in immunoblotting. Give an example of blocking reagent. State the principle of radial immunodiffusion assay. 	10	CO1, CO2, CO3, CO4, CO5	BT1, BT2, BT3, BT4
Q.3	<p>Answer any five from the following in detail.</p> <ol style="list-style-type: none"> How and when the concept of immunology came into light? Discuss the early theories of immunology. Define autoimmunity. Illustrate the underlying mechanism with reference to Rheumatoid Arthritis. Differentiate between the antigen and immunogen. Write about the factors influencing immunogenicity of the pathogen. Draw a well labelled structure of immunoglobulin. Discuss the characteristic features and functions of different types of immunoglobulin. Write a detailed note on B cell maturation. Define ELISA. Write the full form of ELISA? Diagrammatically illustrate the different types of ELISA techniques used for assay. Give detailed account on cells involved in innate immunity. What type of immunity is induced by using vaccine? Discuss the mechanism, advantages and disadvantages of DNA vaccine and recombinant vaccines. 	20	CO1, CO2, CO3, CO4, CO5	BT1, BT2, BT3, BT4