# PG Even Semester Examination, September, 2023

## MICROBIOLOGY

**(2nd Semester)**

**Course No: MBCC-551**
(Cellular Microbiology & Immunology)

FM: 70
Pass Marks : 28
Time: 3 Hours

*The figures in the right margin indicate full marks for the question*
Answer all questions taking one from each unit.

### UNIT-I

1. Define signalling. Elaborately dicuss the cell-to-cell signalling mechanism in prokaryotic organisms. 2+12=14

2. Give detailed account on quorum sensing and neuronal signalling mechanisms in eukaryotic organisms. 7+7=14

### UNIT-II

3. In details write the mechanism of innate immunity and acquired immunity. 7+7=14

4. Discuss in details the two major immune responses and how antibodies are formed in our body? 14



### UNIT-III

5. In details discuss about the central and peripheral lymphoid organs of our body.7+7=14

6. Define antibody. In details discuss its structure with the help of diagram. Also, write about the various biological propertities of immunoglobulins. 14

### UNIT-IV

7. With the help of a diagram explain the slide and tube agglutination test and what are their microbological applications. 14

8. With the help of diagramatic representation explain in detail the hybridoma technology. 14

### UNIT-V

9. Differentiate between β-cell and T-cell mediated hyper-sensitivity. Discuss the various factors that are responsible for induction of hypersensitivity. 7+7=14

10. Discuss in details the role of the major histo-compatibility complex in the immunue response. 14

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