

**THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY**

**[MD 0522]**

**MAY 2022**

**Sub. Code: 2014**

**M.D. DEGREE EXAMINATION**

**BRANCH IV – MICROBIOLOGY**

**PAPER I – GENERAL MICROBIOLOGY AND IMMUNOLOGY**

*Q.P. Code: 202014*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Essay:**

**(2 x 15 = 30)**

1. Explain Antigen Presentation. Write in detail about the Histocompatibility Molecule and HLA Antigens. Add a note on HLA Typing.
2. Define mutation. Write in detail about the types of Mutation, Detection methods and its Clinical Implications.

**II. Short notes:**

**(10 x 5 = 50)**

1. Hydroclave.
2. Immunological Tolerance.
3. Wiskott Aldrich syndrome
4. MALT.
5. Selective Media.
6. Lymphokine Activated Killer Cells.
7. Ignaz Semmelweis.
8. Signal Transduction.
9. Anaerobic Culture Methods.
10. Quorum Sensing.

**III. Reasoning Out:**

**(4 x 5 = 20)**

1. Virus infected cells are killed by NK cells.
2. Autoimmune disorders are more prone in Women.
3. Resolution of a microscope depends upon the numerical aperture of its condenser and the objective.
4. C5a is a potent anaphylotoxin.

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