

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 Questions:

(2 x 10 = 20)

1. Describe the mechanism of anti microbial resistance in bacteria. Discuss the methods of determining the anti microbial resistance of bacteria.
2. Define immune response. Describe cell mediated immune response in detail and the lab methods for detection of cellular immune response.

II. Short Questions:

(8 x 5 = 40)

1. Special components of gram negative cell wall.
2. Major histocompatibility complex.
3. Composition of immunoglobulin classes.
4. B cell synthesis, maturation and uses.
5. Immunotherapy of cancer.
6. Gas sterilisation.
7. Organisation of central sterilisation department.
8. Fluorescent microscope.

III. Reasoning Out:

(4 x 5 = 20)

1. IL-6 is a cytokine with multiple biological activities on a variety of cells.
2. Antibodies frequently coat erythrocytes but fail to form the necessary lattice to produce agglutination.
3. Ideal gelling agent for most microbial media is agar.
4. When an inoculum of cells from pure culture introduced into suitable nutrient medium and incubated, almost all cells grow at a very rapid rate?

IV. Very Short Answers:

(10 x 2 = 20)

1. Prokaryotic nucleoid.
2. Adjuvants.
3. List the secretory product of macrophages.
4. Mention 4 proteins of Ig gene superfamily.
5. Clinical applications of flow cytometry.
6. Tyndalisation.
7. Paul Ehrlich.
8. Clonal selection.
9. Air filters.
10. Source of HLA typing sera.
