

U.G. 5th Semester Examination - 2020

PHYSIOLOGY

[HONOURS]

Discipline Specific Elective (DSE)

Course Code : PHYSIOL-H-DSE-T-2

(Microbiology and Immunology)

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** questions from the following:

2×5=10

- What do you mean by pathogen?
- Name one Gram positive bacteria and one Gram-negative bacteria.
- What do you understand by bacteriostatic agents? Give one example.
- State the use of antibiotics.
- Distinguish between antigen and hapten.
- What is non-specific immunity?
- State the importance of passive immunity.

2. Answer any **two** questions from the following:

5×2=10

- Distinguish between structural difference in the

cell wall of Gram-positive and Gram-negative bacteria. 5

- Distinguish between sterilization and pasteurization. 5

- Classify immunoglobulin. What are the differences in phagocytosis process in neutrophils and monocytes? 2+3=5

- What is meant by autoimmune disease? Explain with one example. 2+3=5

3. Answer any **two** questions from the following:

10×2=20

- Discuss in detail the different phases of bacterial growth curve. How can you determine the generation time of bacteria? 7+3=10
- Describe how the antibiotics are classified in terms of their mode of action. Write the mechanism of action of Penicillin as a bactericidal antibiotic. 5+5=10
- Describe the functions of T lymphocytes. What are the major MHC proteins? 6+4=10
- Write the difference between T cell dependent and T cell independent antigens. Describe the mechanism of action of antibody in body defense mechanism. 3+7=10
