



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2021-22

PHYADSE02T-PHYIOLOGY (DSE1/2)

MICROBIOLOGY AND IMMUNOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

All symbols are of usual significance.

Answer any five questions from the following

$8 \times 5 = 40$

1. Write notes on the following: $4 \times 2 = 8$
 - (a) Bacterial growth curve
 - (b) Autoimmune disease.

2. Classify immunoglobulins. What are the differences in phagocytosis process in neutrophils and monocytes? What is non-specific immunity? 3+3+2

3. Describe the structural differences in the cell wall of Gram-positive and Gram-negative bacteria. Give two examples of Gram-positive and Gram-negative bacteria respectively. 5+3

4. (a) State the difference between T cell dependent and T cell independent antigen. 3+3+2
(b) Describe the process of passive immunization.
(c) What are monoclonal antibodies?

5. (a) State the use of antibiotics. 2+2+4
(b) What is the difference between antigen and hapten?
(c) What are the major MHC proteins?

6. (a) Describe the difference between sterilization and pasteurization. 5+3
(b) How can antibody titer be determined?

7. (a) What are the different types of vaccines available in market? Give one example of each. 4+4
(b) Discuss secondary immune response.
8. (a) What is meant by hypersensitivity? Classify with examples. (2+4)+2
(b) Define cytokines with examples.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

