WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 5th Semester Examination, 2020, held in 2021

PHYADSE02T-Physiology (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   8×5 = 40

1. (a) What do you mean by synchronous growth?   2+2+2+2
    (b) Describe briefly lytic and lysogenic cycle of bacteriophage.
    (c) What is peptidoglycan?

2. (a) State the effect of osmotic pressure on bacterial growth.   3+3+2
    (b) Describe the different methods of sterilization.
    (c) What is plasmid?

3. (a) What are adjuvants? Give example.   2+2+4
    (b) Differentiate between active and passive immunization.
    (c) Describe the principle and application of immunization.

4. (a) Write the different characteristics of lag phase of bacterial growth curve.   3+1+2+2
    (b) What is pasteurization? State its significance.
    (c) Define the generation time of bacteria.

5. (a) Describe different factors that influence immunogenicity.   5+3
    (b) Discuss the mechanism of action of bactericidal antibiotics.

6. (a) Describe the process of T-B cooperation.   4+2+2
    (b) What are epitopes? Write different properties of B and T-cell epitopes.

7. (a) What are MHC molecules?   2+4+2
    (b) Describe the classical pathway of complement activation.
    (c) What is superantigen?

8. (a) What are haptens? Give example. 2+2+4

   (b) What is prion disease?

   (c) Describe the type I hypersensitivity reaction.

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.*

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