



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours/Programme 4th Semester Examination, 2022

**MCBHGE04T/MCBGCOR04T- MICROBIOLOGY (GE4/DSC4)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.*

**Question No. 1 is compulsory and answer any *four* from the rest**

1. Answer any *four* questions from the following: 2×4 = 8
  - (a) What are nosocomial infections?
  - (b) What is diapedesis?
  - (c) What is synergistic mechanism of antibiotics?
  - (d) How the causal organism of tuberculosis survive within host cell?
  - (e) What are KIRs?
  - (f) What is immunological synapse?
  - (g) What are kupffer cells?
  - (h) What is precipitin arc?
  
2.
  - (a) To which family does small pox virus belong? 2+1+2+2+1= 8
  - (b) Name the causative agent of mumps.
  - (c) State the pathogenesis caused by tuberculosis.
  - (d) State the mechanism of action of amantadine and azidothymidine.
  - (e) What are fomite transmissions?
  
3.
  - (a) State the difference between infection and invasion. 2+2+2+2 = 8
  - (b) What is T-B cooperation?
  - (c) What is thymic education?
  - (d) How allergic reaction is related to TH2 subset generation?
  
4.
  - (a) Name the two envelop proteins of measles virus and also mention their functions. 2+2+2+2 = 8
  - (b) What is Freund's incomplete adjuvant? Give example.

- (c) What is the basic principle of immunoelectrophoresis?
- (d) What are the signs and symptoms of tetanus?
5. (a) Name two normal microflora of skin and gastrointestinal tract (one each for Skin and GI tract) 2+2+2+2 = 8
- (b) State the difference between infection and disease.
- (c) What is AICD?
- (d) Name the carrier involved in host pathogen interaction along with their types.
6. (a) What is diphtheria? 2+2+2+2 = 8
- (b) Name the antimicrobial agents that inhibits cell membrane functions and inhibits nucleic acid synthesis. (any one in each case)
- (c) What are different types of mycotoxins?
- (d) What is Stem cell therapy?
7. (a) What are the function of NK cells and dendritic cells? 3+2+2+1 = 8
- (b) What are plasma cells?
- (c) What are M cells?
- (d) What is DPT vaccine?
8. (a) What is Influenza? 2+2+2+2 = 8
- (b) What will happen if penicillin is given to Mycoplasma?
- (c) Name the co-stimulatory molecules involved in Intracellular activation of T cells.
- (d) What is indirect ELISA?

**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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