

2021

(July)

MICROBIOLOGY

(Honours)

(Medical Microbiology and Immunology)

(607 T)

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer Question No. 1 and **any four** from the rest1. Write short notes on the following : $3 \times 4 = 12$

- (a) Normal flora in human gut
- (b) Anti-viral drugs
- (c) Cells involved in immune system
- (d) DNA vaccines

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| 2. (a) Briefly describe the pathogenesis and symptoms of—
(i) typhoid;
(ii) diphtheria. | 3+3=6 |
| (b) Discuss the characteristics of AIDS and its present therapies. | 5 |
| 3. (a) Briefly describe the point of action of a common -lactam and a glycopeptide in inhibition bacterial cell wall synthesis. | 7 |
| (b) Discuss the mechanism of action of polymixins in controlling bacterial infections. | 4 |
| 4. (a) Briefly discuss the site of action of streptomycin, erythromycin, chloramphenicol, norfloxacin and Rifampicin. | 5 |
| (b) Give an account of epigenetic drug resistance in microbial pathogenesis. | 6 |
| 5. (a) What is immune system? What is immunity? Discuss how inflammation protects the host during infection by microorganisms. | $1+1+4=6$ |
| (b) Compare and contrast between innate and adaptive immunities in detail. | 5 |

(3)

- 6.** (a) What are antigens? What are the factors that influence antigenicity of antigens?

1+3=4

- (b) Describe the mechanisms of opsonization and neutralization mediated by antibodies. 7

- 7.** (a) Discuss immunological memory and tolerance taking appropriate examples of immune cells. 6

- (b) What is allergy? Briefly describe using diagrams which antibody mediates allergic responses. 1+4=5

- 8.** (a) What are MHCs? Discuss the immunologic basis of graft rejection. 1+5=6

- (b) What is immunosuppressive therapy? 2

- (c) What is a toxoid? Give example of a toxoid which is widely used. 3

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