

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**T. Y. B. Sc. Sem-V : WINTER- 2022**  
**SUBJECT : MICROBIOLOGY : MEDICAL MICROBIOLOGY**

Day : Wednesday

Time : 02:00 PM-05:00 PM

Date : 7/12/2022

**W-18430-2022**

Max. Marks : 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Draw neat labelled diagram **WHEREVER** necessary.
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**Q.1** Attempt **ANY TWO** of the following (12)

- a) In the context of 'Botulinum toxin', explain the concept of 'progenitor toxin' and 'derivative toxin'. Also enlist the medical and cosmetic uses of 'Botulinum toxin'.
- b) What is 'Pseudomembranous colitis'? Comment on toxins of *Clostridium difficile*.
- c) Comment on permanent exclusions in medical policies.

**Q.2** Attempt **ANY TWO** of the following (12)

- a) Comment on colonization factors of *Helicobacter pylori* in the stomach mucosa.
- b) Explain pathogenicity of *Shigella*.
- c) Describe 'Injectable Polio Vaccine' and 'Oral Polio Vaccine' with special context to its use in India.

**Q.3** Attempt **ANY TWO** of the following (12)

- a) Explain the significance of CCR5 and CXCR4 receptors in the pathogenesis of AIDS.
- b) Describe symptoms and mode of transmission of Chikungunya.
- c) Give etiology and symptoms of Rabies.

**Q.4** Write short notes on **ANY THREE** of the following (12)

- a) Mastitis
- b) Difference between HIV-1 and HIV-2
- c) Mode of transmission of Leptospirosis
- d) Symptoms of Amoebiasis

**Q.5** Attempt **ANY FOUR** of the following (12)

- a) Explain the characteristics of *Clostridium difficile*.
- b) Describe unusual features of flagella of *Helicobacter pylori*.
- c) Summarise cultural characteristics of 'Bacillary dysentery'.
- d) Explain morphology of Polio virus.
- e) Enlist the substrates and enzymes to be used in ELISA during diagnosis of HIV infection.
- f) Describe mode of transmission of Japanese encephalitis.

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