

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**S. Y. B. Sc. Sem-IV : WINTER- 2022**  
**SUBJECT : MICROBIOLOGY : PRINCIPLES OF DISEASE, EPIDEMIOLOGY &**  
**IMMUNOLOGY**

Day : Tuesday

Time : 02:00 PM-05:00 PM

Date : 6/12/2022

**W-18389-2022**

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 diagrams **WHEREVER** necessary.
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**Q.1** Attempt any **TWO** of the following: **(12)**

- a) Describe normal flora of human body and its significance.
- b) Explain food borne transmission of diseases.
- c) What is innate immunity? Explain types and factors affecting innate immunity.

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

- a) Explain the structure and properties of IgG antibodies.
- b) What is complement? Explain in brief classical pathway of complement.
- c) Discuss transmission of diseases by direct contact with examples.

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

- a) Define antigens and explain factors affecting antigenicity.
- b) Describe properties and types of an active immunity.
- c) Explain properties and functions of IgE antibodies.

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

- a) Adjuvants
- b) Phagocytic cells
- c) Epidemic diseases
- d) Droplets and droplet nuclei

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

- a) Give the properties and functions of NK cells
- b) Define monoclonal antibodies and give their any two applications.
- c) What do you mean by chronic and acute infection?
- d) Define carriers and enlist their types.
- e) Draw a neat labelled diagram of IgM antibody.
- f) Define epitopes and enlist their types.

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