

U.G. 4th Semester Examination - 2020

MICROBIOLOGY

[HONOURS]

Course Code : MB(H)CC-L-10

(Immunology)

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

2×5=10

- i) What is herd immunity?
- ii) How toxins are generally attenuated?
- iii) What is opsonization?
- iv) What is complement fixation test?
- v) What is allergen?
- vi) What are the functions of dendritic cells in immune response?
- vii) State the principles of double diffusion technique for immune-assay.
- viii) What is the function of lymph node?

2. Answer any **two** of the following: 5×2=10

- i) Describe the various subsets of T cells and their function.

- ii) How is CTL generated? Describe how a target cell is killed by CTL.
- iii) Draw a typical B cell receptor and describe the physiological significance of its architecture with respect to the B cell activation.
- iv) Describe the oxygen – dependent and independent as well as nitric oxide pathways of phagocytosis.

3. Answer any **two** of the following: 10×2=20

- i) Mention different types of hypersensitivity and describe each type.
- ii) Write the principle behind ELISA. Discuss its application. What are the advantages of ELISA over RIA? 3+3+4
- iii) Compare antigen processing by endogenous and exogenous pathway.
- iv) Write short notes on : $2\frac{1}{2} \times 4$
 - a) MHC
 - b) Complement system and its biological importance
 - c) Active and passive immunization
 - d) Prozone effect
