

6/H-64 (vii) (Syllabus-2015)

2 0 2 3

(May/June)

BIOCHEMISTRY

(Honours)

(Microbiology and Immunology)

(BCHEM-601)

Marks : 56

Time : 3 hours

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

Answer four questions, taking two from each Part

PART—A

1. (a) What are the three domains of life? Briefly explain the characteristics of the three domains of life. 2+6=8

(b) Define culture media, chemically defined media and complex media. 2+2+2=6
2. What is the purpose of using the selective and differential media? Describe the application of selective media with the help of two examples. 5+9=14

3. Write notes on any *two* of the following : 7×2=14
- (a) Food-borne infection
 - (b) Microbial growth
 - (c) Transformation
 - (d) Plasmids

PART—B

4. What are antibodies? Describe the classes and functions of antibodies. 4+10=14
5. Discuss the basic properties of antigens. Give an account of natural and artificial active immunity. 5+9=14
6. Write notes on any *two* of the following : 7×2=14
- (a) Vaccine
 - (b) Allergy
 - (c) Hypersensitivity
7. (a) Describe the underlying genetic mechanisms that contribute to antibody diversity. 8
- (b) What does the clonal selection theory state? Explain with illustrations. 6
