

4/EH-62 (iv) (Syllabus-2015)

2 0 2 3

(May/June)

BOTANY

(Elective/Honours)

(Microbiology, Mycology and Plant Pathology)

(BOTELH-401)

Marks : 56

Time : 3 hours

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

Answer **five** questions including Question No. 1 which is compulsory. Answer the remaining **four** questions, taking **one** from each Section

1. Write short notes on the following : $4 \times 4 = 16$

- (a) Basidiocarp of *Agaricus*
- (b) Cyanobacteria
- (c) Koch's postulates
- (d) Chemoautotrophs

(2)

SECTION—I

2. With the help of suitable diagram, describe the ultrastructure of a bacterial cell. 2+8=10
3. What are viruses? Describe the structure of bacteriophage T₄ with suitable diagrams. 2+8=10

SECTION—II

4. What is decomposition? Give a brief account on the role of microbes in decomposition of organic matter. 1+9=10
5. What are antibiotics? Explain the different types and their mode of actions. 2+8=10

SECTION—III

6. What is heteroecious fungus? Describe the stages of life cycle of *Puccinia* on wheat. 1+9=10
7. Write notes on the following : 5+5=10
- (a) Gametangial contact and Gametangial copulation in fungi
- (b) Economic importance of lichens

(3)

SECTION—IV

8. Describe in brief disease symptoms, disease cycle and control measures of white rust of crucifers. 3+5+2=10
9. Write notes on the following : 5+5=10
- (a) Biological defence mechanisms adapted by plants against infection
- (b) Dissemination of plant diseases
