

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

2 0 1 9

(April)

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 in total including
Question No. **1** which is compulsory, select the
remaining **four** questions, **one** from each Section

1. Write short notes on the following : 4×4=16

- (a) Lysogenic cycle in viruses**
- (b) Distinction between photoautotrophs
and chemoautotrophs**
- (c) Structure of foliage lichen**
- (d) Koch's postulates**

(2)

SECTION—I

2. Describe with the help of suitable diagrams the ultrastructure of a typical bacterial cell. 10
3. Distinguish between cyanobacteria and actinomycetes. Explain, with suitable diagrams, their structures. 5+5=10

SECTION—II

4. Give a detailed account of biodegradation of organic materials. Discuss merits and demerits of the process. 8+2=10
5. Discuss the role of microbes in sewage treatment. 10

SECTION—III

6. Describe with the help of suitable diagrams the steps involved in the development of ascus and basidium. 5+5=10
7. Write detailed notes on the following : 5+5=10
 - (a) Life cycle of pythium
 - (b) Economic importance of lichens

(3)

SECTION—IV

8. Describe in brief disease symptoms, cycle and control measures of white rust of crucifers. 10
9. Describe with the help of suitable diagrams different stages involved in pathogenesis. 10
