

# B. Sc. Part-I

## BOTANY

### Paper-II (Microbiology, Mycology and Plant Pathology)

#### Multiple choice question

1. Which one of the following is neither a prokaryote nor a eukaryote?
  - (a) *Nostoc*
  - (b) *E. coli*
  - (c) *Saccharomyces*
  - (d) T.M.V.
2. Who isolate the plant virus first?
  - (a) W.M. Stanley
  - (b) E.C. Stakman
  - (c) D. Iwanowski
  - (d) K.M. Smith
3. A virus that can reproduce without killing its host is called a:
  - (a) temperate virus
  - (b) lytic virus
  - (c) retroactive virus
  - (d) virion
4. Plasmids are:
  - (a) viruses
  - (b) a type of cyanobacteria
  - (c) essential bacterial genetic elements
  - (d) extrachromosomal genetic elements
5. The obligate parasitic fungi absorb their nourishment from the host cells through the:
  - (a) surface
  - (b) appressoria
  - (c) haustoria
  - (d) rhizoids
6. Members of the class Myxomycetes are known as:
  - (a) amoeboid plasmodia
  - (b) true slime mold
  - (c) pseudoplasmodia
  - (d) pseudo slime molds
7. The fruiting body of Peziza is:
  - (a) Cleistothecium
  - (b) Apothecium
  - (c) Ascocarp
  - (d) Perithecium

8. Covered smut of barley is caused by:

- (a) *Ustilago nuda*
- (b) *Ustilago tritici*
- (c) *Ustilago hordei*
- (d) *Ustilago graminis*

9. Ergot is obtained from:

- (a) *Claviceps*
- (b) *Penicillium*
- (c) *Rhizopus*
- (d) *Agaricus*

10. White rust of crucifers is caused by:

- (a) *Puccinia*
- (b) *Ustilago*
- (c) *Cystopus*
- (d) *Peziza*

11. Gram stain is:

- (a) a chemical for differentiation of bacteria
- (b) a stain produced out of gram seed
- (c) a staining technique developed by Christian Gram
- (d) a trademark

12. Mycoplasma was discovered by:

- (a) Nocard and Roux
- (b) Louis Pasteur
- (c) Lederberg and Zinder
- (d) Leewenhoek

13. Citrus canker is caused by:

- (a) *Xanthomonas* sp.
- (b) *Bacillus* sp.
- (c) *Pseudomonas* sp.
- (d) None of the above

14. Heterothallism in fungi was discovered by:

- (a) C. B. Huggins
- (b) A. F. Blakeslee
- (c) Alexander Flemming
- (d) de Bary

15. Bordeaux mixture consists of:

- (a) Lime and calcium sulphate
- (b) Sulphur and lime
- (c) Copper sulphate and sulphur
- (d) Copper sulphate and lime

### Short answer question

1. Differentiate viruses with that of viroids.
2. Differentiate between the virulent and temperate phages.
3. Distinguish between photoautotrophs and chemoautotrophs.
4. Write a note on smut spores.
5. Write a short note on edible fungi.
6. Give the structure of basidiocarp of *Agaricus*.
7. Give the classification and the habitat of *Aspergillus*.
8. What are the most common symptoms of 'early blight of potato'?
9. Write the important symptoms of green ear disease of bajra.
10. Write a short note on genetic recombination in bacteria.

### Long answer question

1. Describe the structure and multiplication of bacteriophages.
2. Describe in detail the modes of sexual reproduction in bacteria.
3. What is mycoplasma? Describe their structure and also comment briefly on their economic importance.
4. Describe the structure and modes of reproduction in *Albugo*.
5. Give an illustrated account of the life-cycle of *Puccinia graminis*.