B.Sc. (Honours) Examination, 2018

Semester-II (CBCS)

Botany

Paper: CC-3 (Core)

(Mycology and Phytopathology)

Time: Three Hours **Full Marks: 40**

Questions are of value as indicated in the margin.

(Answer question no. 1 and *any four* questions from the rest)

1. Answer ***any eight*** of the following questions: 1×8=8
   a) Name two antifungal drugs which inhibit fungal microtubule synthesis.
   b) Name two pathogenic species of *Rhizopus*.
   c) What are fairy rings?
   d) Name two hyperparasites used in plant disease control.
   e) What are woronin bodies?
   f) Name one cell wall protein of plants.
   g) What are chlamydospores?
   h) Name the pathogen causing bacterial blight of rice.
   i) What are the asexual reproductive structures produced by *Fusarium udum*?
   j) Name one host specific toxin with its producing organism.
   k) Why red onions are resistant to *Colletotrichum circinans*?
   l) Name one basidiolichen.
2. What is Spitzenkörper? Describe the structure and chemical composition of fungal cell wall. Name one antifungal drug which inhibits fungal cell wall synthesis. 2+ 5+1=8
3. Describe the role of fungi in production of different medicinally important compounds. 8
4. Characterize the subdivision Basidiomycotina. Describe the basidia and basidiospores development in *Agaricus*. What is spawn? 3+4+1=8
5. Distinguish between constitutive and inducible defense in plants. Describe different inducible anatomical defense in plants. Write a short note on PR proteins. 2+4+2=8
6. Why *Puccinia graminis* pv. *tritici* is known as macrocyclic and heterocious rust fungus? Describe the different types of spore forms produced by it. What are disjunctor cells? 2+5+1=8
7. Write short notes on: 2x4=8
   (i) Vegetative reproduction in *Saccharomyces cerevisiae*
   (ii) Tetrapolar heterothallism
   (iii) Structure of tobacco mosaic virus
   (iv) Crown gall

_____