

The Assam Royal Global University, Guwahati
Royal School of Life Sciences
M.Sc. (BOTANY) 1st semester
Semester End Examination, December 2018
Course Title: Biology & Diversity of Virus, Bacteria & Fungi
Course Code: BOT144C102

Time: 3 Hours

Maximum Marks: 70

Note: Attempt all questions as per instructions given.

The figures in the right-hand margin indicate marks.

Section – A

- Q.1. Attempt **all** questions. (Maximum word limit 50) 2x8
- A. What are interferons?
 - B. What is teichoic acid?
 - C. What is a zygosporangium?
 - D. What is a Perithecium?
 - E. What are cellulolytic and lignolytic fungi?
 - F. What are necrotrophs and biotrophs?
 - G. What are rhizines?
 - H. What are Fruticose lichens?

Section – B

- Q.2. Answer **any 4**: (Maximum word limit 200) 3x4
- A. Discuss in brief one DNA virus.
 - B. Discuss in brief what Gram stain is?
 - C. Discuss in brief the different types of ascocarps.
 - D. Discuss in brief the virus-vector relationship.
 - E. Discuss in brief the replication of RNA virus
- Q.3. Answer **any 2** (Maximum word limit 350–400) 7x2
- A. Discuss the ultra structure of bacterial cell with appropriate diagrams.
 - B. Discuss the different types of sexual reproduction in fungi.
 - C. Describe in brief life cycle of *Peziza* or *Rhizopus*.
- Q.4. Answer **any 2**: (Maximum word limit 350-400)
- A. What is mutualism? Explain different types of mutual association of fungi with examples.
 - B. What is parasitism? Describe in brief the process of fungal parasitism in plants and humans.
 - C. Describe the process of organic matter decomposition by saprophytes.
- Q.5. Answer **any 1**: (Maximum word limit 600) 14x1
- A. What are lichens? Mention their important characteristics. Explain the different types of reproduction in lichens.
 - B. What are the different types of lichen thallus? Discuss about the ecological and economic importance of lichens.