

Seat No. : _____

SM-109

September-2020

B.Sc., Sem.-VI

**311 : Biotechnology / Env. Science
(Biology of Fungi)**

Time : 2 Hours]

[Max. Marks : 50

- Instructions :**
- (1) Draw figures wherever necessary.
 - (2) Show question number against each answer.
 - (3) Figures in right indicate marks.
 - (4) Answer any **three** out of initial **eight** main questions, Question **9** is compulsory.

Section – I

1. (A) Describe features and various approaches used for fungal classification. 7
(B) Discuss chemistry and ultrastructure of fungal mycelia with diagram. 7
2. (A) Explain the general characteristics of Fungi. 7
(B) Discuss distinguishing characteristics of major classes of fungi. 7
3. (A) Describe taxonomic status, reproduction and importance of *Agaricus bisporus*. 7
(B) Define heterokaryosis and explain events forming a heterkaryon in fungi. 7
4. (A) Explain mating systems among fungi. 7
(B) Write a detailed note on parasexual cycle. 7
5. (A) What is medical mycology ? Explain in details any one mycosis type. 7
(B) Explain methods employed to diagnose fungal infections. 7
6. (A) Write symptoms, causes and control of Cutaneous mycosis. 7
(B) Describe the causative agents, treatment and control of Systematic mycosis in details. 7

7. (A) List secondary metabolites produce by fungi and explain production and importance of any one in detail. 7
 (B) Explain potential of fungi as powerful tool for bioremediation. 7
8. (A) Explain the role of fungi in bioremediation. 7
 (B) Describe methods for preservation of fungal cultures. 7

Section – II

9. Answer in Short : (Any **Eight**) 8
- (1) List three examples vegetative modifications in fungi.
 - (2) Rhizomorph is used for food transport and colonization. (True / False)
 - (3) Give two examples of fungi making Sporangiospores.
 - (4) Name any two types of asexual reproduction in fungi.
 - (5) Name the fungal enzymes hydrolysing starch.
 - (6) Name the polymers found in fungal cell wall.
 - (7) Mushroom growing on wood are known as _____.
 - (8) Symbiotic association between fungi and plants are known as _____.
 - (9) Define Parasexual cycle.
 - (10) Give two examples of *Ascomycete fungi*.
 - (11) What is homothallic structure in fungi ?
 - (12) *Pleurotus ostreatus* is rich in protein. (True / False)
 - (13) Name any one fungus used as bioinsecticide.
 - (14) What is Aflatoxin ?
 - (15) Define Ergotism.
 - (16) Griseofulvin controls dermatophytosis. (True / False)
 - (17) Give mechanism of action of Amphotericin-B.
 - (18) Define Biodeterioration.
 - (19) Give two important features of fungal culture media.
 - (20) Which fungi are used in baking industries ?
 - (21) Primary metabolites are produced during _____ phase.
 - (22) How fungal inoculum can be propagated in the laboratory ?