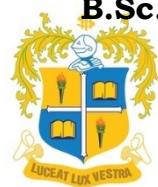


# LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

## B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

THIRD SEMESTER – NOVEMBER 2024

UPB 3501 – FUNGI



Date: 08-11-2024

Dept. No.

Max. : 100 Marks

Time: 09:00 am-12:00 pm

### SECTION A - K1 (CO1)

**Answer ALL the Questions**

**(10 x 1 = 10)**

**1. Fill in the blanks**

- a) Fungal cell walls are primarily composed of \_\_\_\_\_.
- b) *Albugo* belongs to the division \_\_\_\_\_.
- c) *Polyporus*, a bracket fungus, obtains its nutrients through \_\_\_\_\_.
- d) Penicillin, a widely used antibiotic, is derived from the fungus \_\_\_\_\_.
- e) Lichens are classified into three main groups: Crustose, fruticose and \_\_\_\_\_.

**2. State whether the following statements are TRUE or FALSE**

- a) All fungi are obligate parasites.
- b) *Rhizopus* has coenocytic septate.
- c) *Colletotrichum* is a facultative parasite.
- d) Mycorrhizal fungi are obligate parasites.
- e) Lichens can reproduce sexually through spores.

### SECTION A - K2 (CO1)

**Answer ALL the Questions**

**(10 x 1 = 10)**

**3. Choose the correct answer**

- a) Which class of fungi includes mushrooms and toadstools?  
i) Phycomycetes      ii) Ascomycetes      iii) Basidiomycetes      iv) Deuteromycetes
- b) What is the primary method of reproduction in *Saccharomyces*?  
i) Fission      ii) Budding      iii) Fragmentation      iv) Sporulation
- c) Which of the following is a host plant for *Puccinia*?  
i) Wheat      ii) Corn      iii) Sugarcane      iv) All of the above
- d) What is the primary role of fungi in the ecosystem?  
i) Primary producers      ii) Decomposers      iii) Parasites      iv) Symbionts
- e) How do lichens typically reproduce asexually?  
i) Spores      ii) Fragmentation      iii) Budding      iv) Fission

**4. Answer the following, each in about 50 words**

- a) Comment on imperfect fungi.
- b) Mention the structure of *Rhizopus*.
- c) Enlist the reproductive features of *Colletotrichum*.
- d) What are edible fungi?
- e) Lichens as pollution indicators – Comment.

### SECTION B - K3 (CO2)

**Answer any TWO of the following in 500 words**

**(2 x 10 = 20)**

	<b>Draw diagrams / flowcharts wherever necessary</b>
5.	Write an account on mode of nutrition in fungi.
6.	Describe the structure of <i>Neurospora</i> .
7.	Explain asexual reproduction in <i>Peziza</i> .
8.	Give an account on the types and importance of mycorrhiza.
<b>SECTION C – K4 (CO3)</b>	
	<b>Answer any TWO of the following in 500 words (2 x 10 = 20)</b> <b>Draw diagrams / flowcharts wherever necessary</b>
9.	Discuss the classification of fungi by Alexopolus, 1962.
10.	Describe the structure of <i>Aspergillus</i> with a neatly labelled diagram.
11.	Write an account on YAC vector.
12.	Explain the nature of association of phycobiont and mycobiont in lichens.
<b>SECTION D – K5 (CO4)</b>	
	<b>Answer any ONE of the following in 1000 words (1 x 20 = 20)</b> <b>Draw diagrams / flowcharts wherever necessary</b>
13.	Write an essay on reproduction in fungi with neatly labelled diagrams.
14.	Elaborate on the role of fungi in industrial processes with examples.
<b>SECTION E – K6 (CO5)</b>	
	<b>Answer any ONE of the following in 1000 words (1 x 20 = 20)</b> <b>Draw diagrams / flowcharts wherever necessary</b>
15.	Write an essay on the life cycle of <i>Puccinia</i> .
16.	Discuss in detail about the structure, vegetative and asexual reproduction of lichens.

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