



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – APRIL 2024

UPB 3501 – FUNGI

Date: 16-04-2024

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A - K1 (CO1)

Answer ALL the Questions

(10 x 1 = 10)

1. Fill in the blanks

- a) Fungal cell wall is made up of _____ .
b) White rust disease is caused by _____ .
c) The fruiting body of *Peziza* is called as _____ .
d) _____ is called as the wonder drug.
e) Phycobiont is the _____ partner of lichen.

2. State whether the following are True or False

- a) Sclerotium is a resting structure.
b) *Rhizopus* produces tuft of sporangium.
c) *Colletotrichum* belongs to basidiomycetes.
d) VAM fungi is ectomycorrhizal.
e) Soredium is a pustule like structure.

SECTION A - K2 (CO1)

Answer ALL the Questions
10)

(10 x 1 =

3. Choose the correct answer

- a) The fungal hyphae without septum and multinucleate condition
i) Aseptate hyphae ii) Multinucleate hyphae iii) Aciytic hyphae iv) Coenocytic hyphae
b) One of the following species has unicellular thallus
i) *Saccharomyces* ii) *Aspergillus* iii) *Rhizopus* iv) *Albugo*
c) *Puccinia* causes
i) White rust of crucifers ii) Red rot of sugarcane iii) Tikka disease iv) brown rust of wheat
d) Which of the following is a structure associated with Mycorrhizal fungi?
i) Conidium ii) Cephalodium iii) Arbuscles iv) Soredium
e) One of the following is not a Lichen type
i) Crustose ii) Foliose iii) Fruticose iv) Terriose

4. Answer the following

- a) Write a note on Haustorium.
b) Recall the term phialides.
c) Comment on Crozier formation.
d) Show the features of baker's yeast.
e) Define fruticose lichen with example.

SECTION B - K3 (CO2)

Answer any TWO of the following each in about 500 words.

(2 x 10 = 20)

5. Construct the various sexual apparatus and life cycle patterns in fungi.
6. Describe the structure and reproduction in *Rhizopus*.
7. Illustrate the structure of YAC vector and enlist its application.
8. Write notes on various types of mycorrhiza with examples.

SECTION C – K4 (CO3)

Answer any TWO of the following each in about 500 words. (2 x 10 = 20)

- | | |
|-----|--|
| 9. | Distinguish key characters of Ascomycetes with Basidiomycetes. |
| 10. | Compare and contrast various characters of <i>Aspergillus</i> and <i>Penicillium</i> with illustrations. |
| 11. | Write about the economic importance of fungi. |
| 12. | List the importance of lichens. |

SECTION D – K5 (CO4)

Answer any ONE of the following in about 1000 words. (1 x 20 = 20)

- | | |
|-----|---|
| 13. | Compile the salient features of various fungal classes according to Alexopolus 1962. |
| 14. | Critically comment on industrial production of Penicillin with neatly labelled flowchart. |

SECTION E – K6 (CO5)

Answer any ONE of the following in about 1000 words. (1 x 20 = 20)

- | | |
|-----|--|
| 15. | Discuss about the various spore stages and lifecycle of <i>Puccinia</i> . |
| 16. | Construct an essay on the occurrence, structure and reproduction in Lichens. |

#####