(6 pages) **Reg. No. :** .....

Code No. : 6412 **Sub. Code : ZBOM 12**

M.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2022.

First Semester

Botany – Core

MYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following groups has cell wall?
   (a) Bacteria, plant and animals
   (b) Bacteria, fungi and plants
   (c) Bacteria, fungi and animals
   (d) Bacteria and plants only

2. Which component is present in the cell wall of fungi?
   (a) Hemicellulose (b) Cellulose
   (c) Pectin (d) Chitin

3. Ergotamine tartarate extracted from Claviceps, is used to cure _____.
   (a) Bodyache (b) Headache
   (c) Fever (d) Stomach pain

4. Plant decomposers are _____.
   (a) Monera and fungi
   (b) Fungi and plantae
   (c) Protista and animals
   (d) Animals and monera

5. This is a crustose lichen
   (a) *Peltigera* (b) *Usnea*
   (c) *Rhizocarpon* (d) None of the above

6. Majority of lichens are the pollution indicators of
   (a) CO (b) Mercury
   (c) NO_2 (d) SO_2

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7. What does biocontrol refer to?

(a) Use of biological methods for controlling plant diseases

(b) Use of chemical methods for controlling plant diseases

(c) Use of morphological methods by the plants to control the attack of pathogens

(d) Use of physical methods by the plants to control the attack of pathogens

8. What is the method of controlling pests in agriculture by the organic farmer?

(a) Chemical fertilizers

(b) Natural predation

(c) Morphological method

(d) Physiological method

9. The incubation period for stem rust of wheat in south India is

(a) One month (b) 27 days

(c) 12-15 days (d) 60 days

10. Citrus canker is caused by _____.

(a) *Xanthomonas citri*

(b) *Agrobacterium radiobacter*

(c) *Anaplasma phagocytophilum*

(d) *Azotobacter vinelandii*

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Illustrate vegetative reproduction in Ascomycotina.

Or

(b) Express the composition of fungal cell wall.

12. (a) Mention the heterothallism in fungi.

Or

(b) Describe endotrophic mycorrhizae.

13. (a) Explain the mode of nutrition in lichens.

Or

(b) Chart the Miller's classification of Lichens.

14. (a) Describe the defense mechanism in plants.

Or

(b) Mention the physical methods for control the plant diseases.

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15. (a) Identify control measures of mosaic disease in brinjal.

Or

(b) Explain disease cycle in white rust of crucifers.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Illustrate the characteristic features of Deuteromycotina.

Or

(b) Explain the vegetative reproduction in Basidiomycotina.

17. (a) Describe the structure and symbiotic association of mycorrhizae.

Or

(b) Enumerate life cycle pattern in fungi.

18. (a) "Lichens as Pollution Indicators"-Justify.

Or

(b) Defend the reproduction of lichens in three groups.

19. (a) How will you apply biological method of plant disease control? Discuss.

Or

(b) Examine the phytoalexins in plant disease management.

20. (a) Illustrate the effects, symptoms causal organisms disease cycle and control measure of citrus canker disease.

Or

(b) Enumerate the effects, symptoms, causal organisms disease cycle and control measure of late blight of potato disease.

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