



**WEST BENGAL STATE UNIVERSITY**

B.Sc. Honours 2nd Semester Examination, 2022

**BOTACOR04T-BOTANY (CC4)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

1. Answer the following questions: 1×6 = 6
  - (a) What is Amphigastria? Where is it found?
  - (b) Mention the geographical and geological (time period) distribution of *Rhynia*.
  - (c) Name one monoecious Gymnosperm.
  - (d) Differentiate between the Rhizoids of *Riccia* and *Funaria*.
  - (e) What is Ligule? Mention its significance.
  - (f) Mention one tree member of *Gnetum*.
  
2. Answer the following questions (any *eight*): 3×8 = 24
  - (a) Mention the basic differences between the alternation of Generations of Bryophytes and Pteridophytes.
  - (b) Distinguish between Megaphyllous and Microphyllous leaves with regard to Pteridophytes.
  - (c) Mention different Hydrophytic and Xerophytic characters of *Equisetum*.
  - (d) Discuss briefly about the morphological nature of the sporangial structure of *Psilotum*.
  - (e) What is girdling leaf trace? Mention the characters which *Cycas* shares with Ferns. 1+2 = 3
  - (f) Compare the transfusion tissue present in the *Cycas* leaflet and *Pinus* needle.
  - (g) Compare the morphological nature of the ovuliferous scale of *Pinus*.
  - (h) Briefly mention the economic importance of gymnosperms as a source of medicine and essential oil. 1  $\frac{1}{2}$  + 1  $\frac{1}{2}$  = 3
  - (i) Name one heterosporous pteridophyte. Draw and describe the sporangium of *Pteris*.
  - (j) What is Antheridiophore and Archegoniophore? How would you distinguish them? 2+1 = 3
  - (k) Enumerate ecological and economic importance of *Sphagnum*. 1  $\frac{1}{2}$  + 1  $\frac{1}{2}$  = 3

(1) Mention the features which *Anthoceros* shares with Chlorophyceae and Pteridophytes.  $1\frac{1}{2} + 1\frac{1}{2} = 3$

3. Answer the following questions (any *two*):  $5 \times 2 = 10$

(a) *Cycas*, *Pinus* and *Gnetum* — which one is most close to Angiosperm? Justify your answer with reasons. Mention the name of Gymnosperm having Diploxylic vascular bundle and winged pollen grain.  $1 + 3 + \frac{1}{2} + \frac{1}{2} = 5$

(b) Discuss the concept of progressive sterilization of potentially sporogenous tissue, regarding the evolution of bryophytic sporophyte.

(c) How would you separately differentiate the thallus of *Riccia* and *Anthoceros* by internal organization, with labelled diagram?  $3 + 2 = 5$

(d) Differentiate between the elaters of *Marchantia* and *Equisetum* and describe the gametophytic structure of *Psilotum*.

**N.B. :** Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.

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**WEST BENGAL STATE UNIVERSITY**

B.Sc. Honours 2nd Semester Examination, 2022

**BOTACOR03T-BOTANY (CC3)**

**MYCOLOGY AND PHYTOPATHOLOGY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

1. Answer **all** the following questions in brief: 1×6 = 6
  - (a) Mention the main components of fungal cell wall. 1
  - (b) What do you mean by pathogenecity? 1
  - (c) Name one facultative parasite. 1
  - (d) What are endemic diseases? 1
  - (e) Write the name of one bioluminescence fungus. 1
  - (f) What is Buller phenomenon? 1
  
2. Answer any **eight** questions from the following: 3×8 = 24
  - (a) What is mitosporic fungi? Define any two types of asexual spore forming bodies found in them. 1+2
  - (b) What is VAM? Enumerate the characteristic features of Ectomycorrhiza. 1+2
  - (c) Distinguish between hypertrophic and hyperplastic symptoms. 3
  - (d) What are the salient features of basidiomycota? 3
  - (e) What is biological control? Name two fungi used in biological control. 1+2
  - (f) Mention the different types of fruit bodies found in slime molds. 3
  - (g) What do you mean by heterokaryosis? State its significance. 1+2
  - (h) What are systemic fungicides? Give two examples. 2+1
  - (i) Give a brief account of the growth forms of lichens found in nature. 3
  - (j) Draw and label the conidiophore of the genus *Penicillium*. 2+1
  
3. Answer any **two** questions from the following: 5×2 = 10
  - (a) Schematically represent the different types of life cycles found in the genus *Saccharomyces*. Comment on the life cycle pattern. 3+2

- (b) Name the causal organism of late blight of potato disease. Write down the symptoms of early and late blight of potato disease. 1+2+2
- (c) What are mycotoxins? Classify the mycotoxins broadly with examples. 1+4
- (d) Write down the salient features of Oomycota. Mention any two characters that are unique to this group. 4+1

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