

2022

BOTANY

( *Mycology and Phytopathology* )

[ Honours ]

Paper — III

*Full Marks : 60*

*Time : 3 hours*

**Answer all questions**

*The figures in the right-hand margin indicate marks*

1. Answer *all* the questions : 1 × 8

(a) The reserve food material of fungi is \_\_\_\_\_.

(b) The ascocarp of penicillium is \_\_\_\_\_ type.

(c) The white rust of crucifer is caused by  
\_\_\_\_\_.

(d) The female sex organ of Lichen is \_\_\_\_\_.

( Turn Over )



(e) Fungi used to kill herbs are called \_\_\_\_\_.

(f) The toxic secondary metabolites produced by fungi called \_\_\_\_\_.

(g) The Citrus Canker is a \_\_\_\_\_ type of disease.

(h) The cell death occur due to a failure in plasma membrane permeability due to the pathogen attack is called \_\_\_\_\_.

2. Answer any *eight* questions within *two to three* sentences :

$1\frac{1}{2} \times 8$

☒ (a) Facultative Saprophytes

(b) Rhizomorph

(c) Teleutospores

☒ (d) Ectomycorrhiza

☒ (e) Plasmodium

☒ (f) Spawn

☒ (g) Fermentation



~~(h)~~ Mycofungicides

~~(i)~~ Pathogen

~~(j)~~ Disease cycle.

3. Answer any *eight* questions within 75 words :  $2 \times 8$

(a) Cell wall composition of Fungi.

(b) Parasexuality.

~~(c)~~ Cell structure of Saccharomyces.

~~(d)~~ Types of fruiting bodies of slimemolds.

~~(e)~~ Endomycorrhiza.

~~(f)~~ Two economic importance of Lichen.

~~(g)~~ Fungi in cheese production.

~~(h)~~ Medical mycology

(i) Etiology



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(j) Role of quarantine in prevention of plant disease.

Long answer questions within 500 words : 6 × 4

4. Write the life cycle of *Aspergillus*.

*Or*

Life cycle of *Puccinia*.

2. 5. Describe the life cycle of *phytophthora*.

*Or*

✓ Describe the general character and reproduction of Lichen.

6. ✓ Describe the role of Fungi in agriculture as bio-fertilizer.

*Or*

Describe the role of Fungi in biotechnology.



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7. Give an account of host-pathogen relationship.

*Or*

Write the symptoms, causal organism and control of Tobacco mosaic virus and early blight of potato.

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2022

BOTANY

( *Archegoniate* )

[ Honours ]

Paper — IV

*Full Marks : 60*

*Time : 3 hours*

Answer all questions

*The figures in the right-hand margin indicate marks*

1. Answer *all* questions : 1 × 8

(a) Bryophytes grow in \_\_\_\_\_ habitats.

(b) Pseudoelaters are found in the sporophyte of \_\_\_\_\_.

(c) Presence of ligule is the characteristic feature of \_\_\_\_\_.

( Turn Over )



- (d) Who proposed the term telome ?
- (e) The coralloid root of cycas is \_\_\_\_\_ in nature.
- (f) All the Gymnosperm members are without vessels except \_\_\_\_\_.
- (g) \_\_\_\_\_ fossils are suitable for study of external morphology.
- (h) Cycadeoidea was the dominant flora of \_\_\_\_\_ era.

2. Answer any *eight* questions within *two to three* sentences :  $1\frac{1}{2} \times 8$

✓ (a) Define Archegoniates

✓ (b) Alternation of generation

✓ (c) Rhizoids

✓ (d) Apogamy

✓ (e) Actinostele



✓ (f) Sporophyll

(g) Foliage leaves of cycas

(h) Polyembryony

✓ (i) Define fossil

✓ (j) What is geographical time scale ?

3. Answer any *eight* questions within 75 words :  $2 \times 8$

✓ (a) Two unifying features of Archegoniates.

✓ (b) Riccia thallus

✓ (c) Two differences between homosporous and heterosporous.

✓ (d) Aposporous

✓ (e) Two economic importance of Bryophytes.

(f) Structure of ovule of Cycas.

(g) Pinus needle



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(h) Megasporophyll of Cycas.

(i) Mesozoic Era

(j) Rhynia.

Long answer questions within 500 words : 6 × 4

4. Describe the origin of land plants and their adaptations to land habits.

Or

Describe the life cycle of Marchantia.

2. 5. Describe the life cycle of Selaginella.

Or

Describe stellar evolution in pteridophytes.

6. Describe the reproduction in cycas.

Or

Describe the life cycle of pinus



( 5 )

7. Describe Fossilization process in detail.

*Or*

Describe the morphology, anatomy and affinities of *Lepidodendron*.

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#Est

Total Number of Pages—5

II-CC—Bot-III

2023

BOTANY

Paper — CC-BOT-III

[ Honours ]

Full Marks : 60

Time : 3 hours

Answer all questions

*The figures in the right-hand margin indicate marks*

1. Answer *all* the questions : 1 × 8

(a) \_\_\_\_\_ is an unicellular fungi.

(b) \_\_\_\_\_ are known as sac fungi.

(c) In phytophthora the asexual reproductive bodies are \_\_\_\_\_.

(d) All the fungi are \_\_\_\_\_ in nature.

(e) Mycorrhiza is used as \_\_\_\_\_ in agriculture.

( Turn Over )



( 2 )

~~(j)~~ Citric acid is produced by fermenting sucrose by \_\_\_\_\_.

~~(g)~~ Loose smut of wheat is caused by \_\_\_\_\_.

~~(h)~~ Citrus canker is a \_\_\_\_\_ disease.

2. Answer any *eight* questions within *two to three* sentences :

$1\frac{1}{2} \times 8$

~~(a)~~ Mycellium.

~~(b)~~ Uredospore.

~~(c)~~ Conidiophore.

~~(d)~~ Perithecium.

~~(e)~~ Crustose lichen.

~~(f)~~ Oospore.

~~(g)~~ Mycoprotein.

~~(h)~~ Composting in mushroom cultivation.

II-CC-Bot-III

( Continued )

( 3 )

~~(i)~~ Define phytopathology.

~~(j)~~ What is inoculum ?

3. Answer any *eight* questions out of the following :

$2 \times 8$

~~(a)~~ Nutrition of fungi

~~(b)~~ Vegetative reproduction of fungi

~~(c)~~ Heterokaryosis

~~(d)~~ Phycobiont in Lichen

~~(e)~~ Mycorrhiza

~~(f)~~ Fruiting body of Penicillium

~~(g)~~ Haustoria of phytophthora

~~(h)~~ Mycotoxin

~~(i)~~ Pathogenesis

~~(j)~~ Symptoms of Tobacco Mosaic disease.

II-CC-Bot-III

( Turn Over )



( 4 )

Long answer questions within 500 words : 6 × 4

4. Describe the life cycle of Rhizopus.

Or

Describe the life cycle of Penicillium.

5. Describe the life cycle of Albugo.

Or

Describe the types and significance of Mycorrhiza.

6. Describe the processes of mushroom cultivation.

Or

Describe the role of fungi in food industry.

7. What is disease cycle ? Describe the prevention and control of plant diseases.

II-CC-Bot-III

( Continued )

( 5 )

Or

Write notes on :

(a) Vein clearing diseases

(b) Angular leaf spot diseases of Cotton

\_\_\_\_\_

II-CC-Bot-III

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2023

BOTANY

Paper — CC-BOT-IV

[ Honours ]

Full Marks : 60

Time : 3 hours

Answer all questions

*The figures in the right-hand margin indicate marks*

PART — I

1. Fill in the blanks : 1 × 8

✓ (a) The male reproductive stalk like structure in the thallus of Marchantia is called \_\_\_\_\_.

✓ (b) Protonema is the \_\_\_\_\_ phase of Bryophytes.

✓ (c) When the sporangium develops from the group of superficial cells the condition is called \_\_\_\_\_.

( Turn Over )



( 2 )

- (d) The development of gametophytic tissue from the sporophytic tissue without formation of spore is called \_\_\_\_.
- (e) \_\_\_\_ cells are absent in the phloem of Gymnosperms.
- (f) Pollination is \_\_\_\_ in Gymnosperms.
- (g) \_\_\_\_ era is called as the age of mammals.
- (h) The two dimensional fossil devoid of organic material is called \_\_\_\_.

## PART - II

2. Answer any *eight* of the following within two to three sentences :

$1\frac{1}{2} \times 8$

- (a) Vascular plants
- (b) Ligule
- (c) Oogamous sexual reproduction
- (d) Archegonium of funaria

II-CC-Bot-IV

(Continued)

( 3 )

- (e) Haplontic life cycle
- (f) Homospory
- (g) Solenostele
- (h) Endosperm of Gymnosperm.
- (i) Petrification
- (j) Define Paleobotany.

## PART - III

3. Answer any *eight* questions within 75 words :

$2 \times 8$

- (a) Adaptations of Archegoniate to land habit
- (b) Marchantia thallus
- (c) Sporophyll
- (d) Apogamy
- (e) Telome theory
- (f) Pinus ovule

II-CC-Bot-IV

(Turn Over)



( 4 )

- (g) Coralloid root of Cycas
- (h) Two economic importance of Pteridophytes
- (i) Fossilization
- (j) Lepidodendron.

#### PART - IV

Long answer questions within 500 words : 6 x 4

4. Describe life cycle of Riccia.

Or

Describe reproduction of Funaria.

5. Describe life cycle of Psilotum.

Or

Describe heterospory and seed habit of pteridophytes.

II-CC-Bot-IV

(Continued)

( 5 )

6. Describe general characteristic and classification of Gymnosperm upto family.

Or

Describe the reproduction of *Ginkgo*.

7. Give a brief description of Geological Time Scale.

Or

Describe anatomy and affinities of Rhynia.

\_\_\_\_\_

II-CC-Bot-IV

NA-1,200