[This question paper contains 4 printed pages.]

20 **Your Roll No.** 2022

Sr. No. of Question Paper : 729 **B**

Unique Paper Code : 32161201

Name of the Paper : Mycology and Phytopathology

Name of the Course : **Botany**

Semester : II

Duration : 3 Hours Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Question no. **1** is compulsory.
3. Attempt any **four** questions from **2** to **7**.
4. Please attempt all parts of question together.
5. Draw suitable diagrams wherever necessary.

1. (a) Fill in the blanks **(any five)** : (1×5=5)

(i) Bread mold fungus _____ .

(ii) An example of aquatic fungus _____ .

P.T.O.

(iii) Hypha with dolipore septum is a characteristic feature of class _____.

(iv) Fungal cell wall is predominantly made up of _____.

(v) Microorganism responsible for causing Irish famine is _____.

(vi) Fungus causing smut _____.

(b) Define **(any five)** : (1×5=5)

(i) Hymenium

(ii) Cleistothecium

(iii) Teleutospore

(iv) Appresorium

(v) Budding

(vi) Chlorosis

(vii) Annulus

(c) Match the following : (1×5=5)

(i) Holocarpic	(a) Lichen
(ii) Cup fungi	(b) *Stemonites*
(iii) Isidia	(c) Chytrids
(iv) Pheneroplasmodium	(d) *Peziza*
(v) Heteroecious	(e) *Puccinia*

2. Draw a well labeled diagram of **any three** of the following : (5×3=15)

(i) V.S. apothecium of *Peziza*

(ii) Conidiophore of *Penicillium*

(iii) V.S. *Berberis* leaf passing through Aecial cup

(iv) L.S. of *Agaricus* gill

3. Write short notes on **any three** of the following : (5×3=15)

(i) Mycorrhiza

(ii) Fungi affecting human health

(iii) Lichen as pollution indicator

(iv) Application of fungi in Food Industry

4. Explain **any five** of the following : (3×5=15)

   (i) Different forms of thalli in fungi

   (ii) Clamp connection in Basidiomycetes

   (iii) Slime molds

   (iv) Black stem rust of wheat

   (v) Parasexuality in fungi

   (vi) Role of fungi in Biological control

5. Describe **any two** with the help of well labeled diagram : (7.5×2=15)

   (i) Life cycle of *Albugo*

   (ii) Life cycle of *Peziza*

   (iii) Life cycle of *Rhizopus*

6. Write the general characteristics of fungi? Describe their mode of nutrition. (10+5=15)

7. What are the causal organisms, symptoms, and control measures of plant diseases namely Citrus Canker and Early Blight of potato? (7.5+7.5=15)

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Your Roll No. 2022

Sr. No. of Question Paper : 747 **B**

Unique Paper Code : 32161202

Name of the Paper : Archegoniatae

Name of the Course : **B.Sc. (Hons) Botany**

Semester : II

Duration : 3 Hours Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all.
3. Question No. **1** is compulsory.
4. Attempt any **four** questions from the rest.
5. **All** parts of questions must be attempted together.

1. (a) Define the following : (1×5=5)

   (i) Retort cells.

   (ii) Pseudoelaters

(iii) Operculum

(iv) Apogamy

(v) Sulphur shower

(b) Write generic names of the plants studied by you which structural features. (1×5=5)

(i) Prothallus

(ii) Transfusion tissue

(iii) Coralloid roots

(iv) Ovuliferous scale

(v) Rhizophore

(c) Match the following :

(i) Gemma cup	*Porella*
(ii) Amphigastria	*Pinus*
(iii) Winged pollen grains	*Psilotum*
(iv) Whisk fern	*Selaginella*
(v) Resurrection plant	*Marchantia*

(1×5=5)

2. Differentiate between the following (**any three**) : (3×5=15)

(i) Thalli of *Pellia* and *Porella*

(ii) Liverworts and mosses

(iii) Carinal canal and vallecular canal

(iv) Antheridial and archegonial head of *Funaria*

(v) Long and dwarf shoots of *Pinus*

3. Draw well labeled diagram of (**any three**) : (3×5=15)

(i) T.S. coralloid root of *Cycas*

(ii) T.S. stem of *Selaginella*

(iii) L.S capsule of *Funaria*

(iv) T.S. needle of *Pinus*

(v) L.S. Ovule of *Gnetum*

4. Write short notes on the following (**any three**) : (3×5=15)

(i) *Riccia* sporophyte

(ii) Synangium of *Psilotum*

(iii) Telome theory

(iv) Heterospory and seed habit of *Selaginella*

(v) Economic importance of gymnosperms

5. (a) Give an illustrated account of sporophyte of *Funaria* and compare it with that of *Marchantia*. (8)

(b) Give an account of adaptation of bryophytes to land habit. (7)

6. (a) Describe alternation of generation? How apogamy and apospory is deviated from common cycle? (7)

(b) Draw well-labeled diagram of transverse section of *Equisetum* stem and describe the hydrophytic and xerophytic characters found in stem anatomy only. (8)