

Total Pages—3

SH BOT (03)

2018

(2nd Semester)

Time :  $2\frac{1}{2}$  hours

Full Marks : 60

Answer from both the Sections as per direction

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

*Candidates are required to answer in their own words  
as far as practicable*

**(MYCOLOGY AND PHYTOPATHOLOGY)**

**SECTION – A**

1. Answer *all* the following questions :  $2 \times 6$

(a) What is the cell wall composition of Fungi ?

(b) What is the causative agent of "Angular leaf spot of Cotton" and how it can be controlled ?

(c) Why Fungi are considered as saprobs ?

( Turn Over )

( 2 )

- (d) What are Mycorrhiza ?
- (e) What are fruiting bodies ?
- (f) What is the role of Quarantine in preventing the spread of disease ?

SECTION - B

Answer all questions : 12 x 4

2. Describe the thallus organisation, cell wall composition and nutrition in Fungi. 12

Or

Write notes on : 6 x 2

- (i) Classification of Fungi
  - (ii) Economic importance of Fungi.
3. Discuss the life cycle of Agaricus. 12

Or

Write notes on : 6 x 2

- (i) Asexual reproduction in Neurospora
- (ii) Mushroom cultivation.

SH BOT (03)

(Continued)

( 3 )

4. Explain the sexual reproduction and structure of fruiting bodies of Lichen. 12

Or

Write notes on : 6 x 2

- (i) Reproduction in Albugo
- (ii) Endomycorrhiza.

5. Describe the symptoms, disease cycle, prevention and control measures of "White rust of Crucifer". 12

Or

Write notes on : 6 x 2

- (i) Early blight of potato
- (ii) Host-Pathogen relationship.

SH BOT (03)

BA-2,700



Total Pages—3

SH BOT (04)

2018

( 2nd Semester )

Time :  $2\frac{1}{2}$  hours

Full Marks : 60

Answer from **both** the Sections as per direction

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

*Candidates are required to answer in their own words  
as far as practicable*

( ARCHEGONIATE )

SECTION — A

1. Answer *all* the following questions: 2 × 6

(a) What are the probable origin of Bryophytes ?

(b) What is the difference between vascular and non-vascular archegoniate ?

( Turn Over )

( 2 )

- (c) What is Heterospory ?
- (d) Why Gnetum is the most advanced Gymnosperm ?
- (e) What are elaterophores ? Name one Bryophyte where you can find it.
- (f) What are bars of sanio ?

SECTION - B

Answer all questions : 12 x 4

2. Give an account of various types of alternation of generations with examples. 12

Or

Write notes on : 6 x 2

- (i) Thallus organisation in Bryophytes
- (ii) Adaptation to land habit.
3. Describe the structure and reproduction of Anthoceros. 12

SH BOT (04)

(Continued)

( 3 )

Or

Write notes on : 6 x 2

- (i) Sporophyte of Marchantia
- (ii) Economic importance of Bryophytes.

4. What is Stele ? Write the evolution of stelar system in pteridophytes. 12

Or

Write notes on : 6 x 2

- (i) Sporocarp of Marsilea
- (ii) Cone of Equisetum.

5. Discuss the sexual reproduction and life cycle of Gnetum. 12

Or

Write notes on : 6 x 2

- (i) Cycas is a living fossil. Justify.
- (ii) Wood anatomy of Pinus.

SH BOT (04)

BA-2,700



Total Pages—3

SG BOT (02)

2018

( 2nd Semester )

Time : 3 hours

Full Marks : 80

Answer from both the Sections as per direction

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

*Candidates are required to answer in their own words  
as far as practicable*

**(ECONOMIC BOTANY AND PLANT  
BIOTECHNOLOGY)**

**SECTION – A**

1. Answer *all* the following questions: 2 × 8
  - (a) What is the Botanical name of Clove and Black Pepper ?
  - (b) Which part of the cotton plant is used as fibre ?
  - (c) Write in brief the various steps of Tea Processing.

( Turn Over )

( 2 )

- (d) What are the uses of callus culture ?  
(e) What is RAPD ?  
(f) What is Micropropagation ?  
(g) What is Northern Blot ?  
(h) Name 4 species of Gossypium from which cotton fibre is obtained.

SECTION - B

Answer all questions : 16 x 4

2. What is concept of centre of origin of cultivated plants ? Describe centres of origin of cultivated plants as proposed by Vavilov. 16

Or

Write notes on : 8 x 2

- (i) Importance of legumes to man and ecosystem  
(ii) Economic importance of Clove and Black Pepper.

3. Give a general account and extraction method of essential oils. 16

SG BOT (02)

(Continued)

( 3 )

Or

Write notes on : 8 x 2

- (i) Uses of groundnut  
(ii) Uses of cotton.

4. What is Totipotency ? Describe the process of plant tissue culture in brief. 16

Or

Write notes on : 8 x 2

- (i) Application of Embryo culture  
(ii) Micropropagation.

5. What is PCR ? How it has revolutionised genetic engineering. 16

Or

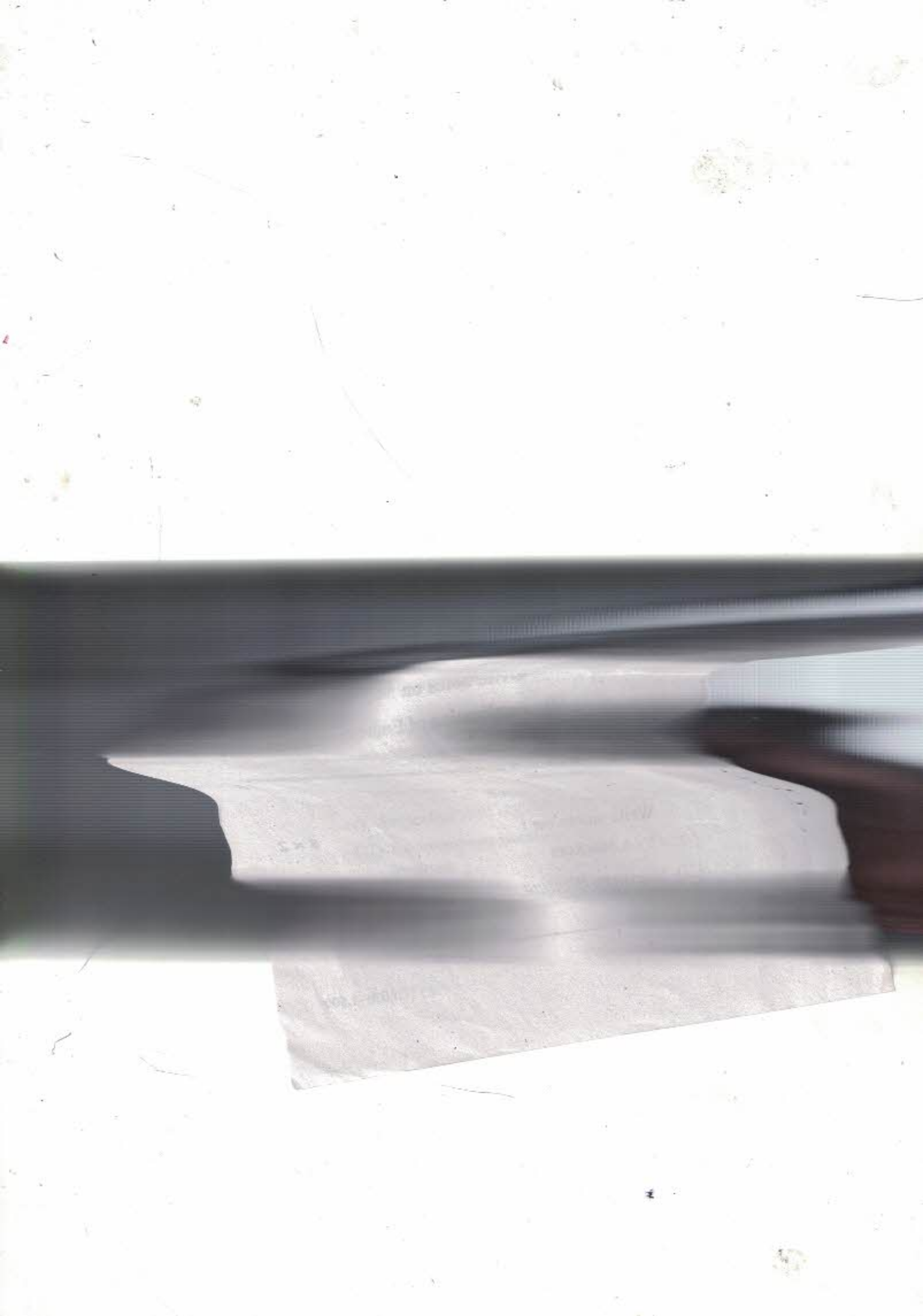
Write notes on : 8 x 2

- (i) DNA Markers  
(ii) Northern Blotting.

SG BOT (02)

BA-1,500





(FBS-IIS BOT (CORE-3))

2017

MYCOLOGY AND PHYTOPATHOLOGY

Time : 2½ Hours]

[Full Marks : 60

Answer from both the Sections as directed. The figures in the right-hand margin indicate marks.

SECTION-A

I. Answer the following questions: 2×6

- (a) What is the reserve food material of Fungi and how the fungi get nutrition from other organisms?
- (b) What are the variety of spores in Fungi?
- (c) What makes fungi different from other plants?
- (d) How is the symbiotic association occurs in Lichen?
- (e) What are the industrial uses of Fungi?
- (f) What is the role of Quarantine in preventing the spread of disease?



SECTION-B

Answer all questions:

- 2. Mention the general characters of Fungi.  
Discuss the affinities with plants and animals. 12

OR

Write notes on the following: 6x2

- (a) Thallus organisation of Rhizopus
- (b) Economic importance of Fungi

- 3. Describe the structure and life cycle of Aspergillus. 12

OR

Write notes on the following: 6x2

- (a) Mushroom cultivation
- (b) Reproduction in saccharomyces

- 4. Describe the structure and life cycle of Albugo. 12

OR

Write notes on the following: 6x2

- (a) Range of Thallus organisation of Lichen
- (b) Endomycorrhiza

(3)

- 5. Describe the symptom, disease cycle, prevention and control measures of black stem rust of wheat. 12

OR

Write notes on the following: 6x2

- (a) Host pathogen relationship
- (b) Citrus canker

**FBS-IIS BOT (CORE-4)**

**2017**

**ARCHEGONIATE**

*Time* : 2½ Hours]

[*Full Marks* : 60

Answer from **both** the Sections as directed. The figures in the right-hand margin indicate marks.

**SECTION-A**

1. Answer the following questions:

2×6

- (a) Why Bryophytes are called as the amphibians of the plant kingdom?
- (b) What are the unifying features of Archegoniate?
- (c) What is Apogamy and how it differs from Apospory?
- (d) In spite of several angiospermic features Gnetum is a Gymnosperm why?
- (e) Differentiate between rhizophore and root of selaginella.
- (f) What is Ligule? Where is it found?



(2)

**SECTION-B**

Answer all questions:

2. Mention the general characters of Bryophytes. Indicate the characters which are essential for land habit of plants. 12

**OR**

Write notes on the following: 6×2

- (a) Salient features of Archegoniate  
(b) Transition to land habit

3. Discuss the gametophytic generation of Marchantia. 12

**OR**

Write notes on the following: 6×2

- (a) Sporophyte of Anthoceros  
(b) Thallus organisation of Porella

4. What is Heterospory? Discuss with examples how heterospory leads to seed habit. 12

**OR**

Write notes on the following: 6×2

- (a) Cone of Equisetum  
(b) Stelar Evolution

(3)

5. Discuss the affinities of Gnetum and show how it is closely related to Angiosperm. 12

**OR**

Write notes on the following: 6×2

- (a) Male cone of Pinus  
(b) Wood anatomy of Pinus

2017

**ECONOMIC BOTANY AND PLANT  
BIOTECHNOLOGY**

Time : 3 Hours]

[Full Marks : 80

Answer from **both** the Sections as directed. The figures in the right-hand margin indicate marks.

**SECTION-A**

1. Answer the following questions: 2×8

- (a) What is the contribution of Vavilov?
- (b) What is the biological importance of legumes?
- (c) Name some important improved varieties of wheat.
- (d) Give the botanical name and family of the oil yielding plants studied by you.
- (e) What is the most commonly used culture medium for plant tissue culture?
- (f) Name the molecular DNA markers.



(3) (2)

- (g) What is PCR?
- (h) What is DNA Finger printing?

**SECTION-B**

Answer all questions: 16x4

- 2. Give an account of origin, morphology, processing and uses of wheat.

**OR**

Write notes on the following:

- (a) General account of Clove
- (b) Importance of Legumes to man and Eco-system

- 3. Explain the morphology, processing and uses of tea.

**OR**

Write notes on the following:

- (a) Extraction of Groundnut Oil
  - (b) Uses of Cotton
- 4. Briefly describe the general tissue culture techniques: sterilization, nutrient media and subculture.

(3)

Write notes on the following:

- (a) Somatic embryogenesis
- (b) Callus culture

- 5. Briefly describe the procedure for Southern Blotting and discuss its uses.

**OR**

Write notes on the following:

- (a) DNA Markers
- (b) PCR