

2024

BOTANY — HONOURS

Paper : DSCC-1

(Plant Diversity)

Full Marks : 75

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer **any six** of the following questions :

(a) What is carbon sequestration?	2
(b) Name two algae from which human food is obtained?	1+1
(c) What is 'VAM'?	2
(d) Why do bryophytes are called amphibians in plant kingdom?	2
(e) Define coenosorus. Where is it found?	1+1
(f) Distinguish manoxylic and pycnoxylic wood.	2
(g) Distinguish between microphyll and megaphyll.	2
(h) Define 'pappus'. Where is it found?	1+1
(i) Define basal placentation. Give an example.	1+1

2. Answer **any three** of the following :

(a) Characterize Ascomycotina. Give an example.	4+1
(b) State three diagnostic features of Bryopsida. Mention two economic importances of bryophytes.	3+2
(c) Mention the diagnostic features of Psilophyta with suitable examples.	4+1
(d) Write a brief note on economic importance of gymnosperms with reference to wood, resin and drugs.	5
(e) Write a note on various modifications of roots found in angiosperms.	5

3. Answer **any four** of the following questions :

(a) State the diagnostic features of Charophyceae and Phaeophyceae. Mention the importance of algae in agriculture and biotechnology.	3+3+3+3
(b) State the diagnostic features of Zygomycotina. Write a note on the importance of fungi as a source of food and medicine.	4+4+4

Please Turn Over

(0934)

- (c) Give an outline of the classification of pteridophytes as proposed by Gifford and Foster (1989). Mention the salient features of Filicophyta. Name one homosporous and one heterosporous pteridophyte. 6+4+1+1
- (d) Write down the characteristic features of Progymnospermophyta. State the diagnostic characters of Cycadophyta with example. 6+5+1
- (e) Distinguish racemose and cymose inflorescences with suitable examples. Write short notes on spikelet, cyathium and verticillaster inflorescences. 6+2+2+2
- (f) Draw and describe different forms of polypetalous corolla. Describe various types of dehiscent fruits with examples. 6+6

2024

BOTANY — HONOURS

Paper : SEC-1

(Mushroom Cultivation Technology)

Full Marks : 75

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer **any six** questions : 2×6
 - (a) Name two species of medicinal mushrooms.
 - (b) Write one example each of morel and coral mushroom.
 - (c) What is 'Pin head' stage?
 - (d) What is dry heat sterilization?
 - (e) What is 'pickling'?
 - (f) Name two non-conventional mushroom substrates.
 - (g) What is spawn running?
 - (h) What is inoculating loop?
 - (i) Name two pests of mushroom.

2. Write short notes on (**any three**) : 5×3
 - (a) Long composting method for mushroom cultivation
 - (b) Mushroom canning technique
 - (c) Methods of spawn preparation
 - (d) Types of mushroom bed preparation
 - (e) Mushroom marketing.

3. Answer **any four** questions :
 - (a) State the differences between short-term and long-term storage methods of mushroom. Discuss the different methods for long-term storage methods of mushroom. Name two chemicals used in storage of mushroom. State the importance of mushroom storage. 3+5+2+2
 - (b) Define cost-benefit ratio of mushroom cultivation. Enumerate economic analysis of any commercially cultivated mushroom on a small scale. Name two amino acids available from edible mushroom. 2+8+2

Please Turn Over

(1011)

- (c) What do you mean by poisonous mushroom? Discuss the effects of mushroom poisoning. Name any three poisonous mushrooms. 2+7+3
- (d) (i) Describe the procedure of cultivation of oyster mushroom. 8+4
(ii) Write a note on maintenance and preservation of pure culture. 8+4
- (e) Describe the common fungal diseases of mushrooms and mention their control measures. 8+4
- (f) Discuss the nutritional values of mushroom. Name two mushroom research centres in India. Name any two food items prepared from mushrooms. 8+2+2