



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY

FIRST SEMESTER – APRIL 2023

UPB 1301 – PLANT DIVERSITY - I

Date: 08-05-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

SECTION A - K1 (CO1)

Answer ALL the Questions

(10 x 1 = 10)

1. Fill in the blanks

- a) In Algae, the pigments are within membrane bound organelles called _____.
- b) A plant root-and-fungus association is called a _____.
- c) The size of the herbarium sheet is 29 cm wide and _____ long.
- d) Presence of _____ tissue is an important feature of the leaf of Gymnosperms.
- e) The fifth fertile glume of paddy is called _____.

2. State whether the following statements are TRUE or FALSE

- a) *Ectocarpus* produces only one type of sporangium.
- b) Conidiospores are produced by all fungi.
- c) *Lycopodium* produced strobili.
- d) Gemma cups are produced by *Marchantia*.
- e) The leaf of *Cycas* is simple.

SECTION A - K2 (CO1)

Answer ALL the Questions
10)

(10 x 1 =

3. Choose the correct answer

- a) Algae belongs to the Kingdom _____.
i) Plantae ii) Animalia iii) Protista iv) Archaea
- b) *Ectocarpus* is a _____ alga.
i) Red ii) Brown iii) Green iv) Blue-green
- c) _____ are two celled and spindle shaped.
i) Uredospores ii) Teliospores iii) Basidiospores iv) Aeciospores
- d) In *Lycopodium*, the vascular bundle made up of only primary xylem and primary phloem is called _____.
i) plectostele ii) protostele iii) actinostele iv) siphonostele
- e) Herbarium was first made by _____.
i) Linnaeus ii) Bentham iii) Hooker iv) Caesalpini

4. Answer the following, each in about 50 words

- a) State the type of inflorescence and fruit of *Annona squamosa*.
- b) Draw and label the habit of *Funaria*.
- c) Write the family and scientific names of Beetroot and Banana.
- d) Mention the basic needs for plant collection.
- e) Comment on the culm and ligule of the family Poaceae.

SECTION B - K3 (CO2)

Answer any TWO of the following in 500 words
20)

(2 x 10 =

	Draw diagrams / flowcharts wherever necessary
5.	Write the economic importance of Pteridophytes
6.	Interpret the general characteristic features of Gymnosperms.
7.	Illustrate and describe the vegetative and floral characters of <i>Euphorbia heterophylla</i> .
8.	Describe the female reproductive structures of <i>Cycas</i> .
SECTION C – K4 (CO3)	
	Answer any TWO of the following in 500 words (2 x 10 = 20) Draw diagrams / flowcharts wherever necessary
9.	Distinguish the characteristic features of the family Lamiaceae.
10.	Explain the types of steles of <i>Lycopodium</i> stem.
11.	Differentiate spices with condiments and essential oils and edible oils, give examples.
12.	Explain the life cycle of <i>Puccinia</i> on Wheat.
SECTION D – K5 (CO4)	
	Answer any ONE of the following in 1000 words (1 x 20 = 20) Draw diagrams / flowcharts wherever necessary
13.	Summarise the salient features of Bentham and Hooker's system of classification.
14.	Compare the internal structure of the normal and coralloid root of <i>Cycas</i> .
SECTION E – K6 (CO5)	
	Answer any ONE of the following in 1000 words (1 x 20 = 20) Draw diagrams / flowcharts wherever necessary
15.	Summarize the sources and uses of various antibiotics obtained from fungi.
16.	Illustrate and summarise both schematic and diagrammatic representations of the life cycle of <i>Lycopodium</i> .

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