

This question paper contains 4 printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : 1558

Unique Paper Code : 216453

C

Name of the Paper : LSPT-408 : Biodiversity III-Plants

Name of the Course : B.Sc. (Prog.)

Semester : IV

Duration : 3 Hours

Maximum Marks : 75

*(Write your Roll No. on the top immediately on receipt of this question paper.)*

Attempt five questions in all.

Q. No. 1 is compulsory.

All questions carry equal marks.

1. (a) Define (any five) :

5

(i) Protostele

(ii) Ligule

(iii) Capitulum

(iv) Sporocarp

(v) Carinal canal

(vi) Protonema

(vii) Lint.

P.T.O.

(b) Match the following :

5

'A'

'B'

Caryopsis

Chloroplast

Coenosorus

*Cycas*

Palisade parenchyma

*Pteris*

Compound umbel

Poaceae

Transfusion tissue

Fennel

(c) Fill in the blanks :

5

(i) *Equisetum* is commonly known as.....

(ii) Blue green algal association is found in ..... of *Cycas*.

(iii) Top-shaped, spiral flagellate microspore is found in .....

(iv) *Tectona grandis* belongs to family.....

(v) Lemma is the modification of .....

2. Draw labeled diagrams of any *three* :

15

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

(b) V.S. leaflet of *Cycas*

(c) V.S. of isobilateral leaf

- (d) L.S. sporophyte of *Funaria*
- (e) T.S. stem of *Selaginella*.
3. Write short notes (any three) : 15
- (a) Amphibian nature of bryophytes.
- (b) Collenchyma
- (c) Importance of heterospory
- (d) *Cycas* as a living fossil
- (e) Economic importance of wheat.
4. Differentiate between (any three) : 15
- (a) Natural and phylogenetic system of classification
- (b) Apogamy and apospory
- (c) Protoxylem and metaxylem
- (d) Male cone of *Cycas* and *Pinus*
- (e) Elaters of *Marchantia* and *Equisetum*.
5. (a) Discuss the Bentham and Hooker's system of classification. Discuss why it is still used in identification of plants. 5

- (b) Expand (any two) of the following : 2
- (i) Linn.
  - (ii) Hook.f.
  - (iii) D.C.
- (c) Comment on artificial system of classification. 3
- (d) Give Botanical names and uses of rice and jute. 5
6. (a) Explain briefly the stelar evolution in Pteridophytes. 5
- (b) Write characteristic features of Pteridophytes. 5
- (c) Describe asexual reproduction in *Marchantia*. 5