LOYOLA COLLEGE (AUTONOMOUS) CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION

PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

SECOND SEMESTER – **APRIL 2025**

UPB2MC02 – PTERIDOPHYTES, GYMNOSPERMS AND PALEOBOTANY

Date: 29-04-2025 Dept. No. Max. : 100 Marks

Time: 09:00 AM - 12:00 PM

SECTION A - K1 & K2 (CO1)		
Q. No	Levels	**Answer the following, each in about 50 words. (10 x 2 = 20)**
1	K1	Define Apospory.
2		What is the significance of winged pollen?
3		Sort the differences between normal and coralloid root.
4		Mention any four economic importance of Gymnosperms.
5		What are *Calamites*?
6	K2	List out the different stele present in Pteridophytes.
7		Mention the functions of ligule.
8		Comment on Progymnosperms.
9		Distinguish between scale and foliage leaves.
10		Name the major eras of the geological time scale.
SECTION B – K3 & K4 (CO2)		
		Answer the following in 500 words. (4 x 10 = 40) **Draw diagrams / flowcharts wherever necessary.**
11	K3	List the characters, origin and significance of Heterospory. Add a note on seed habit. **[OR]**
12		Describe the anatomy of *Equisetum* stem.
13		Compare the similarities shared by *Gnetum* with angiosperms**.** **[OR]**
14		Enumerate the salient features of Pteridospermales.
15	K4	*Adiantum* shows alternation of generation – Substantiate. **[OR]**
16		Describe the structure of microsporophyll and megasporophyll of *Cycas.*
17		Analyse the details of the fossil plant *Williamsonia.* **[OR]**
18		Enumerate the major evolutionary periods of Palaeozoic era.
SECTION C – K5 & K6 (CO3)		
		Answer the following in 1000 words. (2 x 20 = 40) **Draw diagrams / flowcharts wherever necessary.**
19	K5	Describe the habit, structure and alternation of generation in *Marsilea.* **[OR]**
20		Outlinethe classification given by Sporne (1965) and list the characteristics of Gymnosperms.
21	K6	Summarise the life cycle of *Pinus.* **[OR]**
22		Explain the process, methods and types of fossilization.

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