

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2025 ONLY)

25UBY203

REG.NO. :

B.Sc.-BOTANY
SEMESTER: II

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : APRIL-2026

MAXIMUM MARKS: 75
TIME : 3 HOURS

PART - III
23UBY203 – PLANT DIVERSITY II
(PTERIDOPHYTES, GYMNOSPERMS AND PALAEOBOTANY)

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

(K1)

1. Pteridophytes are also called as _____.
a. cryptogams b. vascular cryptogams c. amphibian of the plant kingdom d. phanerogams
2. Salaginella shows which type of spore _____.
a. *Homosporous* b. *Heterosporous* c. *Isosporous* d. *Mono-Sporous*
3. *Cycas revoluta* is popularly known as _____.
a. date palm b. sea palm c. sago palm d. royal palm
4. Select the parasitic plant _____.
a. *Gnetum trinerve* b. *Gnetum contractum* c. *Gnetum montanum* d. *Gnetum ula*
5. Which feature of *Williamsonia* supports its placement in Bennettiales?
a. Needle-like leaves b. Simple cones
c. Bisexual, flower-like reproductive structures d. Absence of vessels

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES.

(K2)

6. Write a note on protocorm of *Lycopodium*.
7. Why *Selaginella* is called as Resurrection plant?
8. Write about Corolloid roots of *Cycas*
9. Write about the systematic position of *Gnetum*.
10. Name any 2 species of *Williamsonia* that were reported from India.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Describe the development of sporangium in *Psilotum*.

(OR)

- b) Show that heterospory leads to the seed habit.

12. a) Pteridophytes are economically important groups of plants – Interpret.

(OR)

- b) Examine the internal structure of stem of *Selaginella*.

(CONTD.....2)

13.a) Describe the structure of ovule in *Cycas*.

(OR)

b) List the general characteristics of Gymnosperms .

14. a) Find the internal structure of leaf of *Gnetum*.

(OR)

b) Show that *Gnetum* has affinities with Angiosperms.

15.a) Comment on the morphology and anatomy of sporophyte of *Rhynia*.

(OR)

b) List the various types of fossils.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

(K4 (Or) K5)

16. a) Trace the evolution of stellar system in Pteridophytes.

(OR)

b) Heteromorphic alternation of generation is observed in the life cycle of *Lycopodium* – Infer.

17. a) Explain the life cycle of *Selaginella* with the help of neat labeled diagram.

(OR)

b) Inspect the ways by which sexual reproduction takes place in *Gleichenia*.

18. a) Classify Gymnosperms based on K.R. Sporne 1965.

(OR)

b) Outline the life cycle of *Cycas*.

19. a) Criticize the ways by which secondary growth takes place in *Gnetum* wood.

(OR)

b) Gymnosperms are economically important for their timber and resins – Infer.

20. a) Discuss about *Lepidodendron* and *Lepidostrobus*.

(OR)

b) Analyse Geological time scale.

ETHICAL PAPER