

**(FOR THE CANDIDATES ADMITTED  
DURING THE ACADEMIC YEAR 2022 ONLY)**

**22PBY102**

**REG.NO. :** \_\_\_\_\_

**N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI**

**END-OF-SEMESTER EXAMINATIONS : DECEMBER-2022**

**COURSE NAME: M. Sc-BOTANY**

**MAXIMUM MARKS: 50**

**SEMESTER – I**

**TIME : 3 HOURS**

**PLANT DIVERSITY- II**

**(PTERIDOPHYTES, GYMNOSPERMS AND PALAEOBOTANY)**

**SECTION – A**

**(10 X 1 = 10 MARKS)**

**ANSWER THE FOLLOWING QUESTIONS.**

**MULTIPLE CHOICE QUESTIONS.**

**(K1)**

1. In *Psilotum*, the sporophytes are ----- branched.  
a) Trichotomously b) Dichotomously c) Tetrachotomously d) Pentachotomously
2. The state with central core of xylem is completely surrounded by phloem is called \_\_\_\_\_.  
a) Protostele b) Plastostele c) Eustele d) Solenostele
3. Which one of the following stages the endosperm formed in Gymnosperms?  
a) At the time of Fertilization b) Before Fertilization  
c) After fertilization d) Along with the development of embryo
4. Internally, the root of *Genetum* resembles the root of \_\_\_\_\_.  
a) Angiosperms b) Pteridophytes c) Bryophytes d) Fungi
5. *Rhynia* belongs to the geological period \_\_\_\_\_.  
a) Devonian b) Permean c) Carboniferous d) Cambrian

**ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)**

6. What is heterospory?
7. Name the vestigial organ found in Pteridophytes
8. What is sulphur shower?
9. How many cotyledons are found in the embryo of *Ginkgo*?
10. Comment on Coal Ball.

**SECTION – B**

**(5 X 3 = 15 MARKS)**

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

11. a) Describe the altered generation of Life cycle of Pteridophytes.  
**(OR)**  
b) Illustrate Synangium of *Psilotum*.
12. a) Examine the Telome theory of heterospory in Pteridophytes.  
**(OR)**  
b) How do you apply the concept of apospory and apogamy in Pteridophytes?

**(CONTD.....2)**

13.a) Enumerate the general characteristics of Gymnosperms.  
**(OR)**

b) Illustrate the internal leaf morphology of *Taxus*.

14.a) Why is *Ginkgo* called living fossils? Describe its distinguishing features.  
**(OR)**

b) Explain in brief the internal structure of *Gnetum* stem.

15.a) Examine the methods of study of fossils.

**(OR)**

b) Categorize the types of Fossils.

**SECTION – C**

**(5 X 5 = 25 MARKS)**

**ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**  
**(K4 (Or) K5)**

16. a) Classify the Pteridophytes as per sporne classification.  
**(OR)**

b) Examine the general characters of Pteridophytes.

17. a) Critically analyze the Stelar Evolution in Pteridophytes.  
**(OR)**

b) Distinguish the sporophytes of Pteropsida with suitable sketch.

18. a) Write the outline of Gymnosperm classification.  
**(OR)**

b) Investigate the economic importance of Cycads.

19. a) Discuss the similarities and dissimilarities of gymnosperms with Pteridophytes.  
**(OR)**

b) *Gnetum* is considered to be an advanced genus of gymnosperms - Justify

20. a) Simplify the glimpses of Geological Time Scale.  
**(OR)**

b) Fossils are the chief indicators of oil exploration and other indicators - Discuss.

\*\*\*\*\*