

Date:

Registration number:

**ST. JOSEPH’S COLLEGE UNIVERSITY, BENGALURU-27**

**B.Sc. BOTANY - II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2024**

**(Examination conducted in May/June 2024)**

**BO 223- DIVERSITY OF NON-FLOWERING PLANTS.**

**(For current batch students only)**

**Time- 2 hrs Max Marks-60**

**This question paper contains ONE printed page and three parts**

***Draw neat labelled diagrams wherever necessary***

**Part-A: Define any 10 of the following in two or three sentences 10 X 2 =20**

1. Appendiculate scale

2. Slime pore

3. Ligule

4. Armed parenchyma

5. Pavement tissue

6. Petrifacations

7. Cortical roots

8. Phlobaphene

9. Birbal Sahni

10. Cataphylls

11. Leptosporangiate development

12. Pollen grains of *Pinus*

**Part-B: Write critical notes on any 5 of the following 5 X 6 =30**

13. Anatomy of *Marsilea* rhizome.

14. Origin of seed habit from the heterosporous condition.

15. *Equisetum* must have had its origin in an aquatic habitat and then adapted itself to

a terrestrial form. Justify the statement with reasons.

16. Exploration of fossil fuels.

17. Economic importance of gymnosperms.

18. Morphological features and anatomy of aerial shoot in *Rhynia*.

19. Vertical section of *Pinus* ovule.

**Part-C: Give a comprehensive account of any 1 of the following 1 X 10 =10**

20. Structure of male cone in *Gnetum* with a neat labelled diagram of the male flower.

21. Structure of *Marchantia* sporophyte.