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(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2021 ONLY)

21PBY205

REG.NO. :

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

END-OF-SEMESTER EXAMINATIONS: JULY -2022

M.Sc.-BOTANY **MAX MARKS: 70**

SEMESTER II **TIME : 3 HOURS**

PART – III

PLANT ANATOMY AND REPRODUCTIVE BIOLOGY

SECTION - A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. (K1)

1. Tunica corpus theory is connected with_____.
   a) Root apex b) Root cap c) Shoot apex d) Secondary growth

2. A narrow layer of thin walled cells found between phloem/bark and wood of a dicot is_____.
   a) Cork cambium b) Vascular cambium c) Endodermis d) Pericycle

3. Which one of the following layer of the anther wall helps in its dehiscence?
   a) Epidermis b) Middle layer c) Endothecium d) Tapetum

4. Egg in female gametophyte is accompanied by _____.
   a) Antipodal cells b) Synergids c) Definitive nucleus d) Tube nucleus

5. The best example of polyembryony is_____.
   a) *Cycas* b) *Cocus* c) *Citrus* d) *Capsicum*

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

6. What are Plasmodesmata?

7. Explain laticifers.

8. Explain the roles of Tapetum.

9. Define triple fusion.

10. Define partheno carpy.

SECTION – B (5 X 4 = 20 MARKS)

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

11. a) Distinguish between storied and non storied type of cambium.

(OR)

b) Analyze the formation of periderm

12. a) Compare the internal morphology of monocot leaves with dicot leaves.

(OR)

b) Differentiate the vascular system of dicot and monocot stem.

(CONTD……2)

13. a) Organize the structure of Microsporangium.

(OR)

b) Write a short note on the methods to overcome sexual incompatibility.

14. a) Describe the structure of embryo sac

(OR)

b) How will you explain double fertilization?

15. a) List out the importance of Parthenocarpy.

(OR)

b) How will you classify polyembryony?

SECTION - C **(4 X 10 = 40 MARKS)**

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS (FROM Qn. No: 17 to 21) **(K4 (Or) K5)**

16. Differentiate water conducting tissue with food conducting tissue system.

17. Illustrate the theories on differentiation of meristems.

18. Describe the classifications of nodal anatomy.

19. Analyze the monosporic and bisporic type of female gametophyte development.

20. Distinguish the types and functions of endosperm with neat sketch.

21. Examine the process of apomixis and its significance.

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