

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2022 only)

22PBY205

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

END-OF-SEMESTER EXAMINATIONS: MAY-2023

COURSE NAME: M.Sc.-BOTANY

MAXIMUM MARKS: 50

SEMESTER: II

TIME : 3 HOURS

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 related to _____.
a) root apex b) shoot apex c) secondary growth d) root cap
2. The _____ connects the vascular system of the leaf with that of the stem.
a) leaf trace b) leaf gap c) lacuna d) leaf sheath
3. The nutritive layer of the microsporangium is _____.
a) endothecium b) endothelium c) tapetum d) epidermis
4. The filliform apparatus is connected to _____.
a) antipodals b) egg cells c) synergids d) polar nucleus
5. Polyembryony was first discovered by _____.
a) Richard b) Winkler c) Bnaun d) Antonie van Leeuwenhoek

ANSWER THE FOLLOWING IN ONE OR TWO SENTENCES. K2

6. Periderm.
7. Trichomes.
8. Stigma.
9. Embryo.
10. Induced polyembryony.

SECTION – B

(5 X 3 = 15 MARKS)

ANSWER EITHER (A) OR (B) IN EACH OF THE FOLLOWING QUESTIONS. K3

11. a) Explain How the cambium formation occurs in plants?
(OR)
b) Describe the development of anomalous secondary growth in monocot stem.
12. a) Interpret the types of stomata with neat diagram.
(OR)
b) Compare the nodal anatomy with illustration.
13. a) Describe the structure of microsporangium.
(OR)
b) Assess briefly the pollen stigma interaction,

(CONTD....2)

14. a) Write the nutrition of embryo sac briefly.
(OR)
b) Describe the double fertilization.
15. a) Mention the significance of apomixes and its applications.
(OR)
b) Give a note on the parthenocarpy and its importance.

SECTION – C

(5 X 5 = 25 MARKS)

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

16. a) Classify the various theories of shoot apex, which explain meristems.
(OR)
b) Summarize the structure and functions of xylem.
17. a) Analyze the development of root stem transition.
(OR)
b) Compare the vascular differentiation of dicot and monocot stem.
18. a) Construct the microsporogenesis with illustration.
(OR)
b) What is incompatibility and their types? Add notes on method to overcome incompatibility.
19. a) Analyze the structure and development of megasporangium.
(OR)
b) Discuss in detail the types and functions of endosperm.
- 20.a) Describe in detail about polyembryony and its types.
(OR)
b) Explain the development of fruit and seeds in detail.
