

M.Sc. BOTANY
FIRST SEMESTER
ADVANCED MORPHOLOGY, ANATOMY AND
TAXONOMY OF ANGIOSPERMS
MSB-101

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1 × 20 = 20

- A plant having hypanthodium inflorescence is:
 - Yucca*
 - Pyrus*
 - Salvia*
 - Ficus*
- A pointed leaf shape with barbs, shaped like a spear point, with flaring pointed lobes at the base:
 - Hastate
 - Reticulate
 - Ovate
 - Cordate
- Which is the identifying character of Lamiaceae?
 - Presence of Cyathium inflorescence
 - Presence of Hypentodium inflorescence
 - Presence of Verticillaster inflorescence
 - Presence of Head or Capitulum inflorescence
- Primitive flower types have:
 - Superior ovaries
 - Inferior ovaries
 - Both a and b
 - None of the above
- The function of cork cambium (phellogen) is to produce:
 - Cork and secondary cortex
 - Secondary xylem and phloem
 - Cork
 - Secondary cortex and phloem
- Marginal placentation is seen in:
 - Rice
 - Pea
 - Cucumber
 - Lemon
- Gulmes and awn are found in:
 - Wheat
 - Sunflower
 - China rose
 - Potato
- Hypogynous ovary means:
 - Superior ovary
 - Inferior ovary
 - Semi-inferior ovary
 - None of these
- Most advanced family among dicotyledons:
 - Malvaceae
 - Rununculaceae
 - Asteraceae
 - Zingiberaceae

10. In which family "Ray floret" is found?
 - a. Asteraceae
 - b. Orchidaceae
 - c. Poaceae
 - d. All of these
11. Collenchyma is a:
 - a. Photosynthetic tissue
 - b. Water conducting tissue
 - c. Living mechanical tissue
 - d. Dead mechanical tissue
12. What is the primary component of plant cell walls?
 - a. Cellulose
 - b. Chitin
 - c. Peptidoglycan
 - d. Glycogen
13. Which of the following is an example of a monocot plant?
 - a. Sunflower (*Helianthus*)
 - b. Rose (*Rosa*)
 - c. Tulip (*Tulipa*)
 - d. Maple (*Acer*)
14. In which part of the leaf are stomata primarily found?
 - a. Epidermis
 - b. Mesophyll
 - c. Xylem
 - d. Phloem
15. Tetradynamous stamens can be seen in:
 - a. Rosaceae
 - b. Asteraceae
 - c. Cruciferae
 - d. Solanaceae
16. Tobacco belongs to family:
 - a. Asteraceae
 - b. Solanaceae
 - c. Liliaceae
 - d. Poaceae
17. Siliqua fruit is characteristic of family:
 - a. Poaceae
 - b. Brassicaceae
 - c. Fabaceae
 - d. Asteraceae
18. Which of the following is not a simple tissue?
 - a. Collenchyma
 - b. Xylem
 - c. Parenchyma
 - d. Sclerenchyma
19. Double fertilization is due to the fusion of:
 - a. Male gametes with egg and synergid
 - b. Male gametes with egg and secondary nucleus
 - c. Male gametes with egg and polar nuclei
 - d. Male gametes with two eggs
20. Bulliform cells are found in the leaves of:
 - a. Sunflower
 - b. Nerium
 - c. Maize
 - d. Lotus

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Draw the labelled diagram of T.S. of dicot root. Give five differences between dicot stem and monocot stem. | 5+5=10 |
| 2. Draw and describe different parts of an Angiospermic flower. Mention the function of the floral parts. | 2+6+2=10 |
| 3. Write about <i>any one</i> of the following Classification systems.
a) Artificial system of classification
b) Natural system of classification | 10 |
| 4. Write the systematic position and characteristics of Orchidaceae family. | 5+5=10 |
| Or | |
| Define herbarium. Describe the techniques of herbarium. | 2+8=10 |
| 5. Give floral diagram and floral formula of the following families, mentioning the scientific names of two economically important plants of each (a) Solanaceae (b) Brassicaceae. | 5+5=10 |
| 6. Explain <i>any two</i> :
a) Bulliform Cells
b) Stomata
c) Cell wall of Bacteria
d) Cambium
e) Quiescent center | 5+5=10 |
| 7. Write in detail the economic importance of family Poaceae and Cyperaceae. | 5+5=10 |
| 8. Write in detail the taxonomic characters and economic importance of family Magnoliaceae. | 5+5=10 |

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