

B.Sc. BOTANY
SECOND SEMESTER
DIVERSITY OF SEED PLANTS: MORPHOLOGY, ANATOMY & SYSTEMATION
BSB - 721

(Use Separate Answer Scripts for Objective & Descriptive)

Duration: 3 hrs.

Full Marks: 70

[PART-A: Objective]

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. The other name for gynoecium is
 - a. Filament
 - b. Pistil
 - c. stigma
 - d. anther
2. Wing seeds are present in
 - a. *Pinus*
 - b. *Cycas*
 - c. *Gnetum*
 - d. All of the above
3. Vascular bundles in dicot stem are
 - a. closed, conjoint, endarch
 - b. open, endarch
 - c. closed, tonjoint, exarch
 - d. open, conjoint, endarch
4. Most advanced dicot family among angiosperms
 - a. Asteraceae
 - b. Ranunculaceae
 - c. Lamiaceae
 - d. Solanaceae
5. Male reproductive organ of a flower
 - a. Pistil
 - b. Stamen
 - c. Calyx
 - d. Corolla
6. The type of Inflorescence observed in the family Lamiaceae is
 - a. Verticillater
 - b. Cyathitun
 - c. Catkin
 - d. Spike
7. Mathematical representation of a flower is called
 - a. Floral diagram
 - b. Floral formula
 - c. Floral parts
 - d. All of above
8. The functional megaspore in an angiosperms develops into
 - a. Endosperm
 - b. Embryo
 - c. Embryo sac
 - d. Ovule
9. Which of the plant is considered as most advanced among gymnosperms?
 - a. *Cycas*
 - b. *Pinus*
 - c. *Abies*
 - d. *Gnetum*
10. Most advanced monocot family among angiosperms
 - a. Poaceae
 - b. Zingiberaceae
 - c. Orchidaçaeae
 - d. Liliaceae

11. In angiosperms, xylem is made up of
 - a. Tracheids and fibres
 - b. Tracheids and vessels
 - c. Fibres
 - d. All of the above
12. Aggregation of flowers in plants is known as
 - a. Aestivation
 - b. Inflorescence
 - c. Phyllotaxy
 - d. Capitulum
13. The age of the tree can be determined by
 - a. diameter
 - b. Annual ring
 - c. Secondary growth
 - d. leaves
14. Bicollateral bundles are found in the stem of
 - a. sunflower
 - b. Dracaena
 - c. Pumpkin
 - d. Mirabilis
15. Which of the following is not a water pollinated plant?
 - a. *Zostera*
 - b. *Vallisneria*
 - c. *Hydrilla*
 - d. *Cannabis*
16. The innermost nutritive layer of anther is known as
 - a. tapetum
 - b. endothecium
 - c. hypodermis
 - d. endodermis
17. Study of pollen grains is known as
 - a. Pomology
 - b. Phycology
 - c. Mycology
 - d. Palynology
18. Pollen grains also known as
 - a. Microsporangium
 - b. microspore
 - c. megaspore
 - d. Polar nuclei
19. Anemophily is also known as
 - a. Wind pollination
 - b. Bat pollination
 - c. Water pollination
 - d. None of the above
20. An example of bat pollinated plant is
 - a. Sunflower
 - b. *Adansonia*
 - c. Maize
 - d. Dragon tree

(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

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

1. Write the differences between dicot and monocot stem? 10
2. Draw and describe the anatomical structure of Pine needle? 10
3. Write the general characteristics of gymnosperms? Write the classification of gymnosperms? 5+5=10
4. What do you mean by anomalous growth in plants? Describe briefly the anomalous secondary growth in *Dracaena* stem with neat diagram? 2+8=10
5. Draw and describe the 7-celled, 8-nucleate embryo sac of angiosperms? 10
6. Write the general characteristics of Asteraceae family. 10
7. Define Binomial Nomenclature? Write the rules of Binomial Nomenclature? 2+8=10
8. Describe briefly the artificial system of classification? 10

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