

Subject: **Botany**

Paper name: **Angiosperm taxonomy, Anatomy, Embryology**

Paper No: **BOT/VI/CC/19**

Semester: **6th Semester**

A. Multiple choice questions [25 (5 from each unit)]

1. The system of classification of plants proposed by Carolus Linneaus is called
 - a) Artificial system
 - b) Phylogenetic system
 - c) Natural System
 - d) None of the above

2. '*The families of Flowering Plants*' was published by
 - a) John Hutchinson
 - b) Engler and Prantl
 - c) Bentham and Hooker
 - d) None of the above

3. In Bentham and Hooker's classification, the class Dicotyledoneae include
 - a) Polypetalae
 - b) Gamopetalae
 - c) Monochlamydeae
 - d) All of the above

4. In Engler and Prantl's classification, the class Dicotyledoneae include
 - a) Archichlamydeae
 - b) Metachlamydeae
 - c) Both (a) and (b)
 - d) None of the above

5. Numerical Taxonomy was first proposed by
 - a) R R Sokal
 - b) P H A Sneath
 - c) Michel Adanson
 - d) V H Heywood

6. The art of herbarium preparation was first initiated by
 - a) Luca Ghini
 - b) Gherards Cibo

- c) John Falconer
 - d) None of the above
7. Label of herbarium should include the following-
- a) Scientific name
 - b) Location
 - c) Habitat
 - d) All of the above
8. Special type of Botanical Gardens are
- a) Arboratum
 - b) Pinetum
 - c) Bombusetum
 - d) All of the above
9. Binomial Nomenclature was first proposed by
- a) Carolus Linneaus
 - b) A P de Candolle
 - c) Ashay Gray
 - d) All of the above
10. In Evolution of Angiosperms, which one of the following families is considered the most advanced family ?
- a) Orchidaceae
 - b) Ranunculaceae
 - c) Liliaceae
 - d) Iridaceae
11. Free pistil and free stamen are found in the family
- a) Magnoliaceae
 - b) Fabaceae
 - c) Rutaceae
 - d) All of the above
12. Pods and legumes are the diagnostic features of the family
- a) Convolvulaceae
 - b) Fabaceae
 - c) Verbanaceae
 - d) Cyperaceae

13. Cyathium inflorescence is the characteristics features of the family
a) Polygonaceae
b) Euphorbiaceae
c) Zingiberaceae
d) Verbenaceae
14. In the family Zingiberaceae, fertile stamen is only
a) One
b) Three
c) Five
d) Two
15. In Bentham and Hooker's system, family Polygonaceae belongs to the sub-class
a) Polypetalae
b) Gamopetalae
c) Monochlamydeae
d) None of the above
16. Which of the following is not a part of periderm?
a) phellogen
b) phellobium
c) phellem
d) phelloderm
17. The activity of normal cambium is abnormal in
a) *Bignonia*
b) *Serjania*
c) *Mirabilis*
d) *Bougainvillea*
18. In which type of root-stem transition the number of vascular bundles formed in the stem is half the number of vascular strands in the root?
a) *Cucurbita*
b) *Lathyrus*
c) *Fumaria*
d) *Anemarrhena*
19. Cystoliths are found in the leaves of
a) *Ficus*
b) *Cynodon*

- c) *Nerium*
 - d) *Hydrilla*
20. Which one is not true for the anatomical features of hydrophytes?
- a) Absence of cuticle
 - b) Presence of air chambers
 - c) Mechanical tissue is reduced
 - d) Sunken stomata
21. Haustorium is formed from micropylar side in
- a) Nuclear endosperm
 - b) Cellular endosperm
 - c) Helobial endosperm
 - d) Ruminant endosperm
22. Which type is characterised by large number of antipodals?
- a) *Drusa*
 - b) *Peperomia*
 - c) *Penaea*
 - d) *Plumbagella*
23. In Piperad type, the first division of the oospore is
- a) transverse
 - b) longitudinal
 - c) oblique
 - d) anticlinal
24. The condition of self-pollination when anthers and stigmas become matured almost at the same time is referred to as
- a) dichogamy
 - b) herkogamy
 - c) heteromorphism
 - d) homogamy
25. Which of the following is the simplest type of polyembryony?
- a) Suspensor polyembryony
 - b) Cleavage of the zygote
 - c) Origin of embryos from synergids
 - d) Nucellar polyembryony

B. Fill up the blanks [15 (3 from each unit)]

1. Chemical features of plants used in classification of plants is called _____
2. “*Genera Planterum*” was published by _____
3. In Hutchinson’s classification, Division Lignosae include only _____ species.
4. Largest Botanical Garden of the world is _____
5. First International Botanical Congress was held in the year _____
6. Different name used for the same taxonomic group is called _____
7. Nitrogen fixing bacteria are found in the root nodules of the species of family _____
8. In the family Euphorbiaceae, the flowers are usually _____
9. Gynostemium is the characteristics features of the family _____
10. Dicot root has radial vascular bundles with _____ protoxylem.
11. In *Mirabilis*, the secondary bundles remain embedded in _____.
12. The rolling of leaves in desert grasses is due to the presence of _____ in the upper epidermis.
13. Cambial layer in Poaceae converts into _____
14. Pollination by butterfly is known as _____
15. In *Mangifera indica*, as many as _____ embryos have been observed in a single seed.

Key Answers

A. Multiple choice questions

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|--------|--------|--------|--------|--------|--------|--------|
| 1. a) | 2. a) | 3. d) | 4. c) | 5. c) | 6. a) | 7. d) |
| 8. d) | 9. a) | 10. a) | 11. a) | 12. b) | 13. b) | 14. a) |
| 15. c) | 16. b) | 17. a) | 18. d) | 19. a) | 20. d) | 21. c) |
| 22. a) | 23. b) | 24. d) | 25. b) | | | |

B. Fill up the blanks

1. Chemotaxonomy
2. Bentham and Hooker
3. Woody species
4. Kew, England
5. 1867
6. Synonym
7. Fabaceae
8. Unisexual
9. Orchidaceae
10. exarch
11. conjunctive tissues
12. bulliform/ motor cells
13. aleurone layer
14. Psychophily
15. Fifty (50)