

B.Sc. BOTANY
THIRD SEMESTER [SPECIAL REPEAT]
ANGIOSPERM TAXONOMY AND DEVELOPMENTAL BIOLOGY
BSB-301

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

- A collection, cultivation, preservation and display of a wide range of plants labelled with their botanical names:
 - Arbaium
 - Herbarium
 - Botanical garden
 - All of the above
- One of the largest herbaria in India is situated in:
 - Mumbai
 - Lucknow
 - Kolkata
 - Delhi
- A leaf with stalk is called:
 - Petiolate
 - Sessile
 - Stalked
 - None of these
- Arrangement of leaf in the stem is known as:
 - Venation
 - Aestivation
 - Phyllotaxy
 - All of these
- Parallel venation is seen in:
 - Monocot angiosperm
 - Gymnosperm
 - Dicot angiosperm
 - Pteridophyta
- Identify the female reproductive organ.
 - Sepal
 - Stamen
 - Petal
 - Carpel
- Union of male and female gamete is called:
 - Fertilisation
 - Aestivation
 - Pollination
 - All of these
- Carolous Linnaeus proposed:
 - Natural system of classification
 - Artificial system of classification
 - Phylogenetic system of classification
 - All of these
- A group of organisms that can reproduce naturally with one another:
 - Species
 - Families
 - Genus
 - Order
- Name the highest unit of classification.
 - Division
 - Class
 - Kingdom
 - Order

11. Phenetic classification is based on:
 - a. Observable characteristics of existing entities
 - b. The ancestral lineage of existing organisms
 - c. Dendrograms based on DNA characteristics
 - d. Sexual characteristics
12. Hutchinson system of classification is:
 - a. Phylogenetic system
 - b. Natural system
 - c. Artificial system
 - d. Asexual system
13. The book "*Genera Plantarum*" was written by:
 - a. Hutchinson
 - b. Bentham and Hooker
 - c. Bessey
 - d. Linnaeus
14. Binomial nomenclature of Rice is:
 - a. *Ipomoea batatas*
 - b. *Solanum tuberosum*
 - c. *Solanum lycopersicon*
 - d. *Oryza sativa*
15. Basic unit of classification is:
 - a. Order
 - b. Class
 - c. Species
 - d. None
16. Tap root system is absent in the family:
 - a. Poaceae
 - b. Fabaceae
 - c. Magnoliaceae
 - d. Rosaceae
17. Tetrastamens can be seen in:
 - a. Rosaceae
 - b. Asteraceae
 - c. Cruciferae
 - d. Solanaceae
18. Who is considered the "father" of modern botanical nomenclature?
 - a. Charles Darwin
 - b. John Ray
 - c. Gregor Mendel
 - d. Carl Linnaeus
19. In botanical nomenclature, the first part of the name represents the:
 - a. Species
 - b. Genus
 - c. Family
 - d. Order
20. What does the term "type specimen" refer to in botanical nomenclature?
 - a. The first plant specimen discovered by a botanist
 - b. The plant specimen used to describe and define a species
 - c. A rare and endangered plant species
 - d. A plant used for medicinal purposes

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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. What is Botanical nomenclature? Describe the principles of International Code of Nomenclature (ICN). | 2+8=10 |
| 2. What is pollination? Write differences between cross and self-pollination. | 2+8=10 |
| 3. What is Double fertilization? Describe the process of Double fertilization with suitable diagram. | 2+6+2=10 |
| 4. Define microsporogenesis. Describe the process of microsporogenesis with suitable diagram. | 2+8=10 |
| 5. What is taxonomy? Discuss its aims and objectives. | 2+8=10 |
| 6. Compare and contrast artificial, natural, and phylogenetic classification methods. | 10 |
| 7. Discuss taxonomic characteristics of family Solanaceae, Brassicaceae. | 5+5=10 |
| 8. Write the economic importance of the family Orchidaceae and Poaceae. | 5+5=10 |

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