

**B.Sc. CHEMISTRY
FOURTH SEMESTER
DIVERSITY OF SEED PLANTS: MORPHOLOGY,
ANATOMY & SYSTEMATICS
BSB-741**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

$1 \times 20 = 20$

(Objective)

- Natural system of classification was proposed by:
a. Bentham and Hooker b. Linnaeus
c. Robert Hooke d. Kanjilal
- Basic unit of classification is:
a. Order b. Class
c. Species d. None
- Which of the following are the non-essential parts of a flower?
a. Androecium and gynoecium b. Sepals and carpels
c. Sepals and petals d. Sepals and gynoecium
- Leaves become modified into spines in:
a. Opuntia b. Onion
c. Silk cotton d. Pea
- Veins of the leaves are useful for:
a. Mechanical support b. Transport of water and minerals
c. Transport of water and minerals d. All of the above
- Gymnosperm differ from angiosperm:
a. Having seeds b. Having fruits
c. Having naked ovules d. None of these
- The *Cycas* has:
a. Oil ducts b. Resin ducts
c. Laticiferous vessels d. Mucilage ducts
- Which of the following shows "Double fertilisation"?
a. Angiosperms b. Gymnosperms
c. Algae d. All of the above
- Transfer of pollen grains to the stigma of a flower is called:
a. Fertilization b. Transfer
c. Maturation d. Pollination
- Plant cell wall is made up of:
a. Chitin b. Protein
c. Cellulose d. Lipid and protein

11. Binomial nomenclature of Tomato is:
- | | |
|--------------------------------|-----------------------------|
| a. <i>Ipomoea batatas</i> | b. <i>Solanum tuberosum</i> |
| c. <i>Solanum lycopersicon</i> | d. <i>Oryza sativa</i> |
12. Use the binomial nomenclature rules you learned to determine which is the correct scientific name for the Mango tree.
- | | |
|----------------------------|----------------------------|
| a. <i>magnifera Indica</i> | b. <i>Magnifera indica</i> |
| c. <i>Magnifera Indica</i> | d. <i>Magnifera indica</i> |
13. The artificial system of classification was based on:
- | | |
|----------------------------------|---------------------------------|
| a. Morphological characteristics | b. Cell wall |
| c. Evolutionary relationships | d. Reproductive characteristics |
14. Linnaeus gave which system of classification?
- | | |
|----------------------|------------------------|
| a. Artificial system | b. Phylogenetic system |
| c. Natural system | d. Evolutionary system |
15. Taxon is a:
- | | |
|--------------------------------|-------------------------------|
| a. A group of related families | b. A group of related species |
| c. A group of any ranking | d. A type of living organisms |
16. The book "*Genera Plantarum*" was written by:
- | | |
|---------------|-----------------------|
| a. Hutchinson | b. Bentham and Hooker |
| c. Bessey | d. Linnaeus |
17. Identify the member of the family Poaceae.
- | | |
|---------------------|---------------------|
| a. <i>Petunia</i> | b. Bamboo |
| c. <i>Rauwolfia</i> | d. <i>Phaseolus</i> |
18. Nicotine is obtained from a plant belonging to:
- | | |
|---------------|-----------------|
| a. Liliaceae | b. Solanaceae |
| c. Asteraceae | d. Brassicaceae |
19. Which family has (9) +1 arrangement of anthers in the androecium?
- | | |
|-----------------|-------------|
| a. Brassicaceae | b. Rosaceae |
| c. Malvaceae | d. Fabaceae |
20. Tap root system is absent in the family:
- | | |
|-----------------|-------------|
| a. Poaceae | b. Fabaceae |
| c. Magnoliaceae | d. Rosaceae |

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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. Describe binomial system of classification. What are the three systems of biological classification? | 5+5=10 |
| 2. With suitable diagram describe different parts of a typical leaf. | 4+6=10 |
| 3. Define double fertilization. Describe the process with suitable diagram. | 2+5+3=10 |
| 4. What are the distinguishing characters of gymnosperms, and how do they differ from angiosperms. | 10 |
| 5. Define cell wall. Mention differences between cell wall and cell membrane. | 2+8=10 |
| 6. What is Taxonomy? What are the merits and demerits of Bentham's and Hooker's classification systems? | 2+4+4=10 |
| 7. What are the characteristic features of family Solanaceae? Draw neat and clean floral diagram of Solanaceae and write its floral formula. | 5+5=10 |
| 8. Write in detail the economic importance of family Poaceae. | 10 |

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