B.Sc. CHEMISTRY
FOURTH SEMESTER
DIVERSITY OF SEED PLANTS: MORPHOLOGY,
ANATOMY & SYSTEMATICS
BSB-741
[USE OMR SHEET FOR OBJECTIVE PART]

SET
A

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 mins.

Marks: 20

Choose the correct answer from the following:

1 ×20=20

1. Natural system of classification was proposed by:
   a. Bentham and Hooker
   b. Linnaeus
   c. Robert Hooke
   d. Kanjilal

2. Basic unit of classification is:
   a. Order
   b. Class
   c. Species
   d. None

3. 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

4. Leaves become modified into spines in:
   a. Opuntia
   b. Onion
   c. Silk cotton
   d. Pea

5. 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

6. Gymnosperm differ from angiosperm:
   a. Having seeds
   b. Having fruits
   c. Having naked ovules
   d. None of these

7. The *Cycas* has:
   a. Oil ducts
   b. Resin ducts
   c. Laticiferous vessels
   d. Mucilage ducts

8. Which of the following shows "Double fertilisation"?
   a. Angiosperms
   b. Gymnosperms
   c. Algae
   d. All of the above

9. Transfer of pollen grains to the stigma of a flower is called:
   a. Fertilization
   b. Transfer
   c. Maturation
   d. Pollination

10. Plant cell wall is made up of:
    a. Chitin
    b. Protein
    c. Cellulose
    d. Lipid and protein

11. Binomial nomenclature of Tomato is:
    a. *Ipomoea batatas*
    b. *Solanum tuberosum*
    c. *Solanum lycopersicon*
    d. *Oryza sativa*

12. Use the binomial nomenclature rules you learned to determine which is the correct scientific name for the Mango tree.
    a. *magnifera Indica*
    b. *Magnifera indica*
    c. *Magnifera Indica*
    d. Magniferaindica

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. Benthem and Hooker
    c. Bessey
    d. Linnaeus

17. Identify the member of the family Poaceae.
    a. *Petunia*
    b. Bamboo
    c. *Rauwolfia*
    d. *Phaseolus*

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 androcium?
    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)

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

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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