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(NEP—2020)

(5th Semester)

BOTANY (MAJOR2)

(Angiosperm Morphology and Plant Systematics)

Full Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

(SECTION : A—OBJECTIVE)

(Marks : 10)

Tick (✓) the correct answer in the brackets provided :

1×10=10

1. Presence of many stamens, hypogynous condition and absence of disc are the characteristic features for the series

- (a) Disciflorae ()
- (b) Calyciflorae ()
- (c) Thalamiflorae ()
- (d) Inferae ()

2. Which of the following is a type of numerical taxonomy?

- (a) Phenetics ()
- (b) Phylogenetics ()
- (c) Cladistics ()
- (d) Proteomics ()

3. Taxonomy differs from systematics since it is restricted to the study of

- (a) identification ()
- (b) evolution ()
- (c) diversity ()
- (d) classification ()

4. In the name *Illicium griffithii* Hook et Thoms, 'et' means
- (a) rank alternation ()
 - (b) joint author ()
 - (c) original author ()
 - (d) name proposal ()
5. The illegitimate name *Malus malus* has to be rejected because it is a
- (a) synonym ()
 - (b) tautonym ()
 - (c) homonym ()
 - (d) basionym ()
6. Fleshy simple fruits with succulent pericarp found in tomatoes are known as
- (a) caryopses ()
 - (b) nuts ()
 - (c) berries ()
 - (d) cypselas ()
7. Caducous calyx refers to the condition when
- (a) there are no sepal ()
 - (b) sepals are funnel-shaped ()
 - (c) sepals fall off very early ()
 - (d) sepals consist of two lobes ()
8. 'Lip or labellum' is observed in the flowers of
- (a) Orchidaceae ()
 - (b) Fabaceae ()
 - (c) Solanaceae ()
 - (d) Asteraceae ()
9. World's largest botanical garden is
- (a) The Missouri Botanical Garden ()
 - (b) Australian National Botanic Garden ()
 - (c) Indian Botanic Garden ()
 - (d) Royal Botanic Garden ()

10. What is the characteristic inflorescence of Asteraceae?

(a) Capitulum ()

(b) Spike ()

(c) Panicle ()

(d) Umbel ()

(SECTION : B—SHORT ANSWERS)

(Marks : 25)

Write short notes on *five*, taking at least *one* from each Unit :

5×5=25

UNIT—I

1. Molecular taxonomy
2. Merits of Bentham and Hooker's system of classification

UNIT—II

3. Rejection of names
4. Hierarchical taxa

UNIT—III

5. Androecium characters
6. Leaf structures

UNIT—IV

7. Floral characteristics of Fabaceae
8. Virtual herbarium

(SECTION : C—DESCRIPTIVE)

(Marks : 40)

Answer *four* questions, taking *one* from each Unit :

10×4=40

UNIT—I

1. Write an account on the classification of angiosperms with special reference to Bentham and Hooker's system of classification. 10
2. Write short notes on the following : 5×2=10
 - (a) Chemotaxonomy
 - (b) Origin of angiosperms

UNIT—II

3. Describe the main principles and rules of international code of botanical nomenclature. 5+5=10
4. Briefly describe the following : 5×2=10
 - (a) Typification
 - (b) Species concept

UNIT—III

5. Discuss the different morphological characters of angiosperms with special reference to root and stem. 5+5=10
6. Write short notes on the following : 5×2=10
 - (a) Gynoecium
 - (b) Corolla characters

UNIT—IV

7. Explain in detail the different preparation techniques and management of a herbarium. 10
8. Give brief notes on the following : 5×2=10
 - (a) Economic importance of Solanaceae
 - (b) Diagnostic features of Zingiberaceae

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