(d) What is the basic concept behind APG system of classification ? Write a brief note on APG system of classification. Discuss the merits and demerits of it. 1+6+3=10

(e) Describe different theories regarding the origin and evolution of Angiosperm.

(f) What is numerical taxonomy ? Describe the principle of numerical taxonomy. Mention the applications of it. 2+6+2=10

2024
BOTANY

(Honours Core)

Paper : BOT-HC-4036

(Plant Systematics)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following/Fill in the blank/ Choose the correct answer : 1×7=7

   (a) Who first used the term 'taxon' ?

   (b) What type of fruit is developed from an apocarpous gynoecium ?

   (c) Define phylogenetic tree.

   (d) What do you understand by 'OTUs' ?

   (e) '_____' is the conserved name of the family Poaceae.

(f) Name the family where gynobasic style is found.

(g) The book, *Theories Elementaire de la Botanique* was written by

(i) Carolus Linnaeus

(ii) Theophrastus

(iii) Bentham and Hooker

(iv) A. P. de Candolle

2. Answer the following : 2×4=8

(a) Differentiate between taxonomic species concept and biological species concept.

(b) Describe the androecium of Zingiberaceae.

(c) Write the difference between monophyly and polyphyly.

(d) Mention the basic concept of which Linnaeus system of classification was based.

3. Answer *any three* of the following questions : 5×3=15

(a) What is virtual herbarium ? Discuss the advantages of virtual herbarium.

(b) Give a brief account on important botanical gardens of India.

(c) Describe the floral peculiarities of the family Orchidaccae.

(d) What do you mean by 'typification' ? Write an account on various 'types' used in plant nomenclature.

(e) Write a note on rules of 'effective and valid publication'.

4. Answer *any three* of the following : 10×3=30

(a) What is natural system of classification ? Give the detailed outline of Bentham and Hooker system of classification. Mention the merits and demerits of the classification. 1+6+3=10

(b) Why is the family Asteraceae regarded as most advanced among dicots ? Describe the characteristic features of in florescence found in Asteraceae. 7+3=10

(c) What is palynology ? Discuss the role of palynology in taxonomy. Give suitable example. 1+7+2=10