

M.Sc. BOTANY
First Semester
Higher Plant Diversity
(MSB - 03)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20

Part-B (Descriptive)=50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer the following questions (any five)

2×5=10

- a) Name two plants of economic importance of family Rutaceae.
- b) What do you mean by Gynobasic style? Name one family where Gynobasic style is found.
- c) Name two plants having syngenesious and synandrous stamens, (Mention one plant in each case)
- d) How will you differentiate Poaceae family from Cyperaceae family? (Mention two characters)
- e) Draw the aestivation of corolla of *Pisum sativum*.
- f) What is epipetalous? Cite one plant having epipetalous condition.
- g) Give two examples of epiphytic orchids.

2. Answer the following questions (any five)

3×5=15

- a) Write three distinguishing characteristics of family Rosaceae.
- b) Write the names of three economic plants of family Malvaceae.
- c) Write the families of the following plants: - Radish, Oat, Sweet pea.
- d) What are the names of the fruits of the following plants:-Citrus, Brinjal, Banana.
- e) Distinguish between Gamopetalous and Epiphylous.
- f) Give three primitive characters of Ranunculaceae
- g) Write three characters of Hutchinson's system.

3. Answer the following questions (any five)

5×5=25

- a) Give an account of the family Fabaceae mentioning the distinguishing characteristics of its sub-families.
- b) Distinguish between
 - (i) Malvaceae from Tiliaceae
 - (ii) Orchidaceae from Asteraceae
- c) Give the distinguishing characteristics of the family Euphorbiaceae. Mention two plants along with their scientific names.
- d) "Orchidaceae family is considered as highly evolved among monocots" – Justify.
- e) Write notes on
 - (i) Coralloid roots of *Cycas*
 - (ii) Polyembryony in *Pinus*
- f) Write notes on the salient features of Bennettiales.

OR

Write in brief the economic importance of Gymnosperms.

- g) Write in short the development of male gametophyte or female gametophyte found in *Cycas* with illustration.

M.Sc. BOTANY
First Semester
Higher Plant Diversity
(MSB - 03)

(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes

Marks – 20

PART A- Objective Type

I. Choose the correct options from the following:

1 × 20 = 20

1. Adolf Engler and Karl Prantl's system was
 - a) Transitional phylogenetic system
 - b) Sexual system
 - c) Natural system
 - d) None of the above
2. The basic taxon is the
 - a) Genus
 - b) Sub species
 - c) Species
 - d) Variety
3. Most of the biological names have been derived from
 - a) Latin
 - b) German
 - c) Sanskrit
 - d) English
4. "General Plantarum" which appeared in 3 volumes from 1862-1883 was written by
 - a) John Hutchinson
 - b) Bentham and Hooker
 - c) Engler and Prantl
 - d) None of the above
5. The aestivation of corolla of "*Crotalaria juncea*" is
 - a) Valvate
 - b) Vexillary
 - c) Imbricate
 - d) Twisted
6. In *Leucas aspera*, the stamens are
 - a) Didynamous
 - b) Tetradidynamous
 - c) Diadelphous
 - d) None of the above
7. The flowers of *Helianthus annuus* located in the centre of the Head is called
 - a) Ray florets
 - b) Disc florets
 - c) Pedicellate
 - d) None of the above
8. Pappus is found in
 - a) Solanaceae
 - b) Scrophulariaceae
 - c) Verbenaceae
 - d) Asteraceae

