

2019

Part – II

BOTANY

(Honours)

Paper – III

Full Marks – 90

Time : 4 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Group – A

- A. Answer any **three** of the following : $2 \times 10 = 20$
- What is called "Gaus Exclusion Principle"?
 - Difference between Realised Niche & Generalised Niche.
 - Define 'OTU's & 'Cluster Analysis'".
 - What is called "Carbon Sequestration"?
 - What are the bases for Environmental Impact Assessments (EIA)?
 - Give the morphology of 'Coir' & 'Opium'?

- g) Distinguish between Crude Drug & Commercial Drug.
- h) Compare between 'holotype' & 'Lectotype'.
- i) Give the floral formulas of Poaceae.
- j) Define taxonomy. Who had coined this term?
- k) Distinguish between bracketed key & indented key.
- l) Present the similarity between Xerophytes & Halophytes.
- m) Differences between physically dry soil & physiologically dry soil.
- n) What is called "Rejection of Names"?

Group – B

- B. Answer *any five* of the following : 8×5=40
- a) What are the phases of Taxonomy? Discuss the floral features of Alismataceae. 3+5
 - b) What are the tools & techniques of herbarium preparations? Discuss about the Role of Botanical Garden. 5+3
 - c) Diagrammatically represent the "Sulphur Cycle". Give the effects of Entrophic terms. 5+3
 - d) Discuss about the anatomical features in solving taxonomic problems. 8

- e) Represent the anatomical & physiological features of Mesophytes. 4+4
- f) Distinguish between on the basis of *floral features*: (any **two**) 2×4
- Apocynaceae & Scrophulariaceae.
 - Cucurbitaceae & Asclepiadaceae.
 - Zingiberaceae & Orchidaceae.
- g) Discuss on the Causes & Consequences of deforestation. 3+5
- h) Discuss about the Cultivation & Trading processes of *Chrysanthemum* in India. 5+3
- i) Discuss about the oil extraction process of Lemon grasses. What are the basis for evaluation of *drugs*? 5+3

Group – C

- C. Answer any **two** of the following : 15×2=30
- What are the aims and objectives of 'Chipko Movement'?
 - Give the Role of GIS in Vegetation Studies.
 - Give the Floristic overview of Sunderban. 5+5+5

- b) i) Give an out line of Bentham & Hooker's System of Classification upto series. Write the merits & demerits of this classification.
- ii) Give the active principles & adulterants of *Rauwolfia* (Root) & *Alstonia* (Bark).
6+4+5
- c) Write notes on the following : 5×3
- i) Classify ornamental plants;
- ii) Theories regarding origin of Angiosperms;
- iii) Objectives of JFM (Joint Forest Management).
- d) Mention the phytogeographical Regions of India (According to D. Chatterjee). Discuss on the floristic composition of Eastern Himalaya. Discuss on the endemism and exotics of India flora. 6+4+5
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