

Total Pages--6

UG/II/BOT/H/III/17(New)

2017

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*

Illustrate the answers wherever necessary

[NEW SYLLABUS]

GROUP--A

1. Answer any *ten* of the following : 2 × 10
- (a) Define effective and valid publication.
- (b) Name two families where epigynous flowers are found.

(Turn Over)

- (c) What is holotype ?
- (d) Distinguish between bracketed key and indented key.
- (e) Define alpha and beta taxonomy.
- (f) What is niche ?
- (g) Distinguish between **Red Data Book** and **Green Data Book**.
- (h) What is EIA ?
- (i) Write the morphological nature of the following :
 - (i) Litchi
 - (ii) Cotton
 - (iii) Orange
 - (iv) Couliflower.
- (j) What is Ethnopharmacology ?
- (k) Distinguish between physically dry soil and physiologically dry soil.

(3)

- (l) Mention the morphological and chemical nature of fibre of cotton.
- (m) What is adulteration ?
- (n) Define social forestry

GROUP-B

2. Answer any *five* of the following : 8 × 5
- (a) Characterise the family Orchidaceae. Why is the family considered the most advanced among Monocotyledons. 6 + 2
 - (b) Write the roles of Cytology and Anatomy in Taxonomy. 4 × 2
 - (c) Write the diagnostic floral features of the following : 2 × 4
 - (i) Verbenaceae
 - (ii) Scrophulariaceae
 - (iii) Anacardiaceae
 - (iv) Orchidaceae

- (d) Present the floral features of the family Rutaceae. Discuss about the economic importance of the family Asteraceae. 5 + 3
- (e) Describe the steps of Tea cultivation and harvesting processes. 6 + 2
- (f) Depict the 'Phosphorus' cycle that occurs in nature. Write the importance of N₂ cycle. 6 + 2
- (g) Define Ethnobotany. How do the different tribes use plants as medicines beverages and agricultural implements ? 2 + 6
- (h) Write short notes on : 4 + 4
- (i) Vegetation of Eastern Himalayas
- (ii) Vegetation of Sundarban.

3. Answer any *two* of the following : 15 × 2

- (a) What is Phylogenetic System of classification ? Give a classification of plants after Arthur and Cronquist (1988). Give an idea of APG system of classification (2009). Write about typification. 1 + 6 + 5 + 3

(b) Write short notes on any *three* of the following : 5 × 3

(i) Active principle and common adulterants
Alstonia bark, *Zinziber* rhizome and
Rauwolfia root.

(ii) Importance of G. I. S in vegetation study.

(iii) Oil extraction on Lemon grass.

(iv) Reclamation of wasteland.

(v) Morphological and anatomical adaptations of Xerophytes.

(c) Write the scientific names, families and morphological nature of used parts of any five plants : 3 × 5

(i) Jute

(ii) Coconut

(iii) Potato

(iv) Ipecae

(v) Lentil

(vi) Gumhar.

- (d) Briefly point out the aims and objectives of Plant Geography. What is endemism? State the 'age and area' hypothesis. Name two endemic species from Eastern Himalayas. Write in brief about the vegetation of Gangetic Plain. 3 + 2 + 2 + 2 + 6
-