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

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

[OLD SYLLABUS]

GROUP — A

- 1. Answer any ten of the following : 2 × 10**
- (a) Define Omega taxonomy.**
- (b) Define effective and valid publication.**

(Turn Over)

- (c) What is the purpose of chemotaxonomy ?
- (d) What is paratype ?
- (e) Define monophyletic evolution.
- (f) What is indented keys ?
- (g) What is gynobasic style and where is it found ?
- (h) Write the type of fruits in following plants :
- (I) Coriander
 - (II) Banana
 - (III) Periwinkle
 - (IV) Orange.
- (i) Write the morphological nature of the following :
- (I) Litchi
 - (II) Cotton
 - (III) Naspati
 - (IV) Cauliflower.

- (j) What is syngenesious stamen ?
- (k) Define apospory and apogamy.
- (l) What is corpusculum ?
- (m) Define amphitropous ovule.
- (n) What are synergids ?
- (o) What is parietal placentation ?
- (p) What is hypanthodium ?

GROUP – B

2. Answer any *five* of the following : 8 × 5
- (a) Describe about keys with examples. 8
 - (b) Write the role of chemotaxonomy and Anatomy in taxonomical study. 4 + 4
 - (c) Write the diagnostic characters of the following : 2 × 4
 - (i) Verbenaceae
 - (ii) Scrophulariaceae

(iii) Anacardiaceae

(iv) Orchidaceae.

(d) Write the development of a dicotembryo. 8

(e) Write the distribution features of the following : 2 × 4

(i) Nymphaeaceae

(ii) Apiaceae

(iii) Cannaceae

(iv) Cyperaceae.

(f) Write the silvicultural method of *Tectona* sp. 8

(g) Write about cultivation of lemon grass. 8

(h) Write short notes on : 2 × 4

(i) Basal placentation

(ii) Pollinia of Asclepiadaceae

(iii) Seeds of Orchidaceae

(iv) Floral parts of Nymphaeaceae.

GROUP – C

3. Answer any two of the following : 15 × 2
- (a) Write an outline of Bentham and Hooker system of classification. Mention its merits and demerits. Write about spikelet inflorescence with sketches. 8 + 3 + 4
- (b) What is pollination ? Describe about types and contrivances of pollination with example. Write the cultivation of tuberose in brief. Classify economically important plants based on uses. 1 + 6 + 4 + 4
- (c) Write the scientific names, families and morphological nature of used parts of any five : 3 × 5
- (i) Ground nut
 - (ii) Coir
 - (iii) Turmeric
 - (iv) Coffee
 - (v) Gumhar

- (vi) Opium
- (vii) Ladys finger
- (viii) Yew.

(d) Differentiate any *three* of the following pairs of families with special reference to floral biology : 5 × 3

- (i) Lamiaceae and Acanthaceae
 - (ii) Alismataceae and Liliaceae
 - (iii) Arecaceae and Orchidaceae
 - (iv) Acanthaceae and Rusiaceae
 - (v) Magnoliaceae and Casuarinaceae.
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