

NEW

Part-III 3-Tier

2017

BOTANY

(Honours)

PAPER—VII

(PRACTICAL)

Full Marks : 100

Time : 6 Hours

The figures in the right-hand margin indicate full marks.

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

Answer all questions.

1. Draw, label and describe the specimen 'A' with prepare botanical terms. Dissect the flower and leave the preparation. Write the floral formula and draw the floral diagram. Identify the family and genus with reasons following the supplied published key. 18

[Dissection of Floral parts—2; Drawing and labelling—3+2; Description—5; Floral formula—1; Floral Diagram—2; Family identification with reason—1; Genus identification with reasons—2]

(Turn Over)

2. (a) Make a temporary preparation of crude drug powder of the specimen 'B'. Draw, label and identify the crude drug. 3

[Labelled sketches—1 $\frac{1}{2}$; Identification with reasons—1 $\frac{1}{2}$]

- (b) Identify the specimen 'C' performing at least two chemical tests for tannin or alkaloids. 2+2

3. (a) Make a thin and stained T.S. of the specimen 'D'. Draw, label and identify the specimen with anatomical comments. Submit your preparation. 12

*[Section cutting—1 ; Staining—1 ;
Mounting—1 ; Drawing—3 ; Labelling—2) ;
Anatomical comments—4 ;]*

- (b) Make a thin T.L.S. / R.L.S of the specimen 'E' and prepare a temporary slide. Draw label and identify the specimen with anatomical comments, submit your preparation. 8

*[Section cutting—1 ; Drawing—2 ; labelling—2 ; Anatomical
comments—2 ; Identification—1 ;]*

4. (a) Determine minimum size and number of quadrats of sample space 'F'. Determine the density, abundance and frequency of a herbaceous community of sample space 'F'. 5

- (b) Identify the specimen 'H' with its anatomical feature and comment on its ecological significance. 3
5. (a) Identify the specimens 'I', 'J' and 'K'. Mention their family names, generic names and specific epithets.
 [Family— $\frac{1}{2}$; Generic name—1 ; Specific Epithet— $\frac{1}{2}$]
- (b) Identify the fossil specimens with reason 'L' and 'M' $1\frac{1}{2} + 1\frac{1}{2}$
- (c) Identify the specimens with reasons 'N' and 'O'. 2+2
- (d) Identify the pollen type 'P' with reasons. 1+1
6. Submission :
- (a) Herbarium specimen 6
- (b) Laboratory Note Book. 4+2+2+2
- (c) Field records including tour diary & slides. 4
7. Viva-voce. 10