

OLD
Part-III 3-Tier
2017

BOTANY
(Honours)
PAPER—VIII
(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.

Illustrate the answers wherever necessary.

1. Make a suitably stained squash preparation of the pretreated and preixed root tip material 'A'. Determine the mitotic index of the specimen supplied. Draw, label and count the chromosomes from a scattered metaphase plate. 15

(squash preparation— 3; Calculation (mitotic index)— 5; preparation of metaphase plate— 3; Drawing and labelling—

3;

2. Calculate the Segregation ratio of the sample 'B' and determine the 'Goodness of fit' from the specimen supplied. 8

[Calculation—6; Conclusion—2]

3. Perform two physiological experiments as indicated (3a, 4b) in the card to be drawn from a lot. Write in brief the experimental procedures, results and inferences. 15+5

[(For 3a : Requisition—2; Set up—2;

Procedure—5; Result—4; Inference—2;]

(For 3b : Requisition—1; Set up—1;

Procedure—1; Result & Comments—2;)]

4. Perform the qualitative/quantitative (Sample 'C') test(s) as indicated in the card drawn from a lot. 10

[Requisition—2; Procedure & Result—6; Inference—2;]

5. Perform the plant ecology experiment as indicated in the card. Write down requisition/brief experimental procedure / results and inference of the experiment.

15

[Requisition— 4; Experimental Procedure— 5;

Results & Inferences— 6;]

6. *Demonstrate the plant breeding experiment* as mentioned in the card to be drawn from a lot. Write the experimental procedure in brief. 3+3

[Demonstration— 3; Procedure— 3;]

7. Identify the slides D. E and F with necessary comments. 3×2

[Identification— 1; Comment— 1;]

8. Laboratory note book. 10

9. Viva-Voce. 10

[Instructions to the Students]

- (i) Requisition for Q. No. 3 (a & b), Q. No. 4 and Q. No. 5 must be written in separate sheets and duly endorsed by an examiner/invigilator.
- (ii) Requisition sheet for Q. No. 3 (a & b) and Q. No 5

must be submitted within 20 minutes of commencement of examination.

- (iii) Names of the experiments as indicated in card drawn from lots for Q. No. 3 (a & b), Q. No. 4, Q. No. 5 and Q. No. 6 as well as lot no. of Sample B (Q. No. 2) must be written on the first page of the main answer script and endorsed by an examiner/invigilator.
- (iv) All observations and experimental set up must be endorsed by an examiner/invigilator.
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