



**SB-3457**

**M. Sc. (Part - I) Examination**  
**March / April - 2011**  
**Botany : Paper - IV**  
**(Plant Development & Reproduction)**  
**(Old Course)**

Time : 3 Hours]

[Total Marks : 52

**Instructions :**

(1)

नीचे दृशावेक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
M. SC. (PART - 1)

Name of the Subject :  
BOTANY - IV (OLD)

Subject Code No. : 3 4 5 7 Section No. (1, 2,.....) : 1&2

Seat No. :

Student's Signature

- (2) Answer to each section should be written in separate answer books.  
(3) Sketch neat and labelled diagrams wherever it necessary.  
(4) Figure to the right indicate full marks of the questions.

**SECTION - I**

1 Describe the primary and secondary cell wall formation with their components. 9

**OR**

1 Describe the structure and development of shoot apex. 9

2 Explain in detail the structure and development of sieve elements. 9

**OR**

2 Describe : 9  
(1) Classification of sclereids  
(2) Phylogeny of xylem

3 Give detail account of general anatomy of flower. 8

**OR**

3 Describe : 8  
(1) Ontogeny of nodal anatomy  
(2) Trichomes

## SECTION - II

4 Describe in detail the types and ultrastructure of Embryo sac. 9

OR

4 Write notes on : 9  
(1) Male sterility  
(2) Pollen-pistil interaction

5 Describe in detail the embryogeny in *Lobelia amoena* and *sagittaria*. 9

OR

5 Describe : 9  
(1) Apomixis  
(2) Function of Endosperm

6 Write short notes on : (any two) 8  
(1) Nucellus culture  
(2) Parasexual hybridization  
(3) Embryo culture  
(4) Parthenocarpy.

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