

AE-772

M.Sc. (Final)
Term End Examination, 2016-17

BOTANY

Paper - I

Plant Development and Reproduction

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 36

Note : Answer **all** questions. All questions carry equal marks.

1. Describe the various theories relating to the growth and development in the root apex.
2. Write notes on any **two** of the following :
 - (a) Lateral root development
 - (b) Flower development and genetics of floral organ differentiation
 - (c) Root nodules

(2)

3. What do you mean by vascular tissue differentiation ? Give a concise account of the origin and structural differentiation of xylem and phloem.
4. Differentiate between the following :
 - (a) Trachieds and Vessels
 - (b) Primary and Secondary cambium
 - (c) Mesophyll of dicot and Monocot leaf
 - (d) Monocot and Dicot embryo
 - (e) Growth rings and Annual rings
5. What is Cork Cambium ? How it differs from vascular cambium and what changes take place in the plant body due to its activities.
6. Give a critical account of any **two** of the following :
 - (a) Pollen Embryo
 - (b) Tapatum
 - (c) Self incompatibility
7. Explain the various types of embryo sac found in angiosperms.

(3)

8. Comment on any **five** of the following :

- (a) Phyllotaxy
- (b) Tylosis
- (c) Male sterility
- (d) Pollen allergy
- (e) Hybrid seed production
- (f) Wood

9. Write an essay on 'Apomixis'.

10. Explain the following :

- (a) Programmed Cell Death (PCD)
- (b) Methods overcoming seed dormancy
