



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – ADVANCED ZOOLOGY AND BIOTECHNOLOGY**

FIRST SEMESTER – NOVEMBER 2016

**16UPB1AL01 - BASICS OF PLANT BIOLOGY**

Date: 09-11-2016  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**Part – A**

**(10 x 2 = 20 Marks)**

*Answer the following, each within 50 words.*

1. What is Apophysis?
2. Define resurrection plants.
3. Mention any four plants with their scientific names belonging to family Rutaceae.
4. Distinguish between edible oils and essential oils.
5. What is Anisocytic stomata?
6. What is lithocyst?
7. Draw the structure of pollen wall.
8. What is double fertilization?
9. Write down the significance of transpiration.
10. What is Oxidative phosphorylation?

**Part – B**

**(5 x 7 = 35 Marks)**

*Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary.*

11. (a) Discuss the methods of vegetative reproduction in *Funaria*.  
Or  
(b) Describe the internal structure of *Cycas* rachis.
12. (a) Describe the characteristic features of the family Cucurbitaceae.  
Or  
(b) Write the binomial, family and useful parts of any one medicinal and fibre yielding plants.
13. (a) Give a brief account on the classification of meristems.  
Or  
(b) Write notes on hydathodes, laticifers and nectaries.
14. (a) Mention the differences between nuclear, cellular and helobial endosperms.  
Or  
(b) Illustrate the development of dicot embryo.
15. (a) Explain the flowchart for TCA cycle. Mention the enzymes involved in it.  
Or  
(b) List out the physiological effects of auxins and cytokinins.

*Answer any three of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary.*

16. Give a detailed account on the life cycle of *Puccinia*.
17. Describe the characteristic features of the family Euphorbiaceae and Lamiaceae.
18. Compare the internal structure of dicot and monocot stem.
19. Describe the structure of microsporangium and megasporangium.
20. Write detailed notes on Light reaction.

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