

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



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

**FIRST SEMESTER – APRIL 2018**

**17/16UPB1AL01– BASICS OF PLANT BIOLOGY**

Date: 30-04-2018

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

**PART – A**

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

*Answer the following, each within 50 words.*

1. Draw and label the structure of *Ectocarpus*.
2. Which is called resurrection plant? Give reason.
3. Write the binomial of any four plants of the family Rutaceae.
4. Mention any two timber yielding plants with their scientific names and uses.
5. Define hydathodes.
6. What are Laticifers?
7. Draw the ultra-structure of pollen wall and label the parts.
8. What is double fertilization?
9. What is TCA cycle?
10. Give the differences between transpiration and translocation.

**PART – B (5 X 7 = 35 Marks)**

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

11. (a) Describe the internal structure of the stem of *Funaria*.

OR

- (b) Write notes on anatomical features of coralloid root of *Cycas*.

12. (a) Describe the characteristic features of the family Lamiaceae.

OR

- (b) Write the common name, binomial, family, useful part and uses of any two essential oils and pulses.

13. (a) Describe the anatomy of the dicot stem.

OR

- (b) Give a brief account on different types of stomata.

14. (a) Describe the structure of microsporangium.

OR

- (b) Bring out the differences between nuclear and cellular endosperm with examples.

15. (a) List the physiological effects of auxins and gibberellins

OR

- (b) Draw the flowchart for steps in glycolysis.

**PART – C (3 X 15 = 45 Marks)**

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

16. Describe the life cycle of *Puccinia*.
17. Write the common name, binomial, family, the morphology of the useful parts and uses of any two vegetables, spices, medicinal plants and cereals.
18. Distinguish between dicot and monocot leaf.
19. Describe embryogenesis in dicotyledons.
20. Explain the mechanism and significance of light reaction in photosynthesis.

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