

B.Sc. DEGREE END SEMESTER EXAMINATION MARCH 2017
SEMESTER – 2: BOTANY (COMPLIMENTARY COURSE FOR ZOOLOGY)
COURSE: 15U2CPBOT2: PLANT PHYSIOLOGY

(Common for Regular 2016 Admission / Supplementary 2015 & 2014 Admissions)

Time: Three Hours

Max. Marks: 60

PART A

Answer **all** questions. Each question carries one mark.

1. Define imbibition.
2. What is a redox reaction?
3. Define water potential.
4. What is red drop?
5. Define root pressure.
6. What is PAR?
7. What is meant by transpiration flux?
8. What is RUBISCO?

(1 x 8 = 8)

PART B

Answer **any six** questions. Each question carries two marks.

9. Explain radial translocation of water?
10. Explain the role of ethylene in morphogenesis.
11. Describe abscission process with its significance.
12. Explain photoperiodism.
13. Write short note on vernalization.
14. Describe the pigments associated with photosynthesis.
15. What is the significance of photosynthesis?
16. Describe the role of NADPH in photosynthesis?
17. Describe the role of cytokinin in morphogenesis.
18. Explain the role of gibberellins in plants.

(2 x 6 = 12)

PART C

Answer **any four** questions. Each question carries four marks.

19. Describe absorption spectrum and action spectrum.
20. Differentiate between diffusion and imbibition's.
21. Describe the role of RUBISCO.
22. Explain the reasons for high rate of photosynthesis in grasses.

23. Describe SPAC.

24. Write a short note on nitrogen cycle.

(4 x 4 = 16)

PART D

Answer **any two** questions. Each question carries twelve marks.

25. Describe cyclic and non-cyclic photophosphorylation.

OR

26. Describe the theories to explain the ascent of sap in plants.

27. Critically evaluate C3 and C4 pathway with emphasis on biomass production.

OR

28. Describe stomatal transpiration with significance and factors affecting it.

(12 x 2 = 24)
