Reg. No.................................   Name...

BSC. DEGREE END SEMESTER EXAMINATION MARCH 2017
SEMESTER – 6: BOTANY (CORE COURSE)
COURSE: **U6CRBOT9 –: PLANT PHYSIOLOGY AND BIOCHEMISTRY**
(For Regular - 2014 Admission)

Time: Three Hours   Max. Marks: 60

PART A

I. Answer **ALL** questions; each question carries ONE mark.
1. Define water potential.
2. What is chlorosis?
3. Explain Emerson effect.
4. What is vernalisation?
5. Name the gaseous hormone. What is its physiological role in plants?
6. Define pH.
7. What is a hydathode?
8. Give an example for a disaccharide.

$$(1 \times 8 = 8)$$

PART B

II. Answer **ANY SIX** questions; each question carries TWO marks.
9. What are antitranspirants? Give an example.
10. List two characteristic features of C4 plants.
11. Explain phloem loading and unloading.
12. What is R.Q.? What is its significance?
13. Water is an amphoteric molecule. Explain.
14. What are cytokinins? What is its physiological role?
15. Differentiate between endosmosis and exosmosis.
16. What are heteropolysaccharides? Give an example.
17. Explain anaerobic respiration. What are its end products?
18. Distinguish between fats and oils

$$(2 \times 6 = 12)$$

PART C

III. Answer **ANY FOUR** questions; each question carries FOUR marks.
19. Explain Munch's Hypothesis.
20. Give a schematic representation of Glycolysis.
21. Describe the adaptations of plants to water stress.
22. Explain the primary structure of proteins.
23. Distinguish between simple and compound lipids with examples.
24. Explain allosteric modulation.

$$(4 \times 4 = 16)$$

PART D

IV. Answer **ANY TWO** questions; each question carries TWELVE marks.

25. Explain stomatal movement. Discuss the theories that explain stomatal opening and closure.

OR

26. With a schematic diagram, explain the Dark reaction of photosynthesis.

27. Explain the structure, characteristics and mode of action of enzymes.

OR

28. What are carbohydrates? Explain the structure and role of different types of carbohydrates in plants.

(12 x 2 = 24)

****