C 25922
SECON

(Pages : 3)

Name	
Name	

Reg. No.....

# SECOND SEMESTER B.Sc. DEGREE (SUPPLEMENTARY) EXAMINATION APRIL 2017

(UG-CCSS)

#### Complementary Course

#### BO 2C 02-PLANT PHYSIOLOGY AND ECOLOGY

Time : Three Hours	Maximum : 30 Weightage

Illustrate if necessary.

#### Part A

#### Answer all questions.

- Osmotic pressure is higher in :
  - (a) Isotonic solution.

- (b) Hypertonic solution.
- (c) Hypotonic solution.
- (d) None of the above.
- 2. Dimorphic chloroplasts are found in :
  - (a) C2 plants.

(b) C3 plants.

(c) C4 plants.

- (d) CAM plants.
- 3. An example for a natural auxin is :
  - (a) 2,4-D.

(b) IAA.

(c) EMS.

- (d) BAP.
- 4. Which of the following is a parasite?
  - (a) Vanda.

(b) Cuscuta.

(c) Nerium.

(d) Hydrilla.

#### Fill in the blanks:

- Swelling up of dry seeds when placed in moist filter paper is called ————.
- Source of oxygen in photosynthesis is ————.
- is the hormone responsible for fruit ripening.
- 8. Velamen roots are found in ----

Turn over

#### Answer in one word :

- 9. Flow of water through cell walls and intercellular spaces.
- 10. The force of attraction between water and walls of xylem.
- 11. A biliprotein that can exist in two inter- convertible forms, involved in flower initiation.
- A completed succession that has reached the final stage.

 $(12 \times 14 = 3 \text{ weightage})$ 

#### Part B (Short Answer Questions)

#### Answer all questions.

- 13. Write note on DPD.
- 14. Define Osmosis.
- 15. Which are the different types of transpiration?
- 16. Comment on Emerson effect.
- Explain Chloroplast dimorphism in C4 Plants.
- 18. What is Stratification?
- 19. What is meant by vernalization?
- 20. What is an ecosystem?
- 21. What is hydrosere ?

 $(9 \times 1 = 9 \text{ weightage})$ 

## Part C (Paragraph Questions)

### Answer any five questions.

- 22. Write explanatory notes on imbibition and diffusion.
- Write an account on Root pressure theory.
- Explain C0<sub>2</sub> fixation in C4 plants.
- 25. Describe non-cyclic photophosphorylation.
- 26. Explain the physiological role of Auxins.
- 27. Write an account on the physiology of fruit ripening.
- 28. Explain the role of biotic factors in an ecosystem.

 $(5 \times 2 = 10 \text{ weightage})$ 

## Part D (Essay Questions)

Answer any two questions.

- Explain Glycolysis with a schematic diagram.
- Discuss the statement that "Transpiraton is a necessary evil".
- 31. Describe the morphological, anatomical and physiological adaptations in halophytes.

 $(2 \times 4 = 8 \text{ weightage})$