

BACHELOR OF SCIENCE (CBCS-2018 COURSE)
S. Y. B. Sc. Sem-IV :SUMMER- 2022
SUBJECT : BOTANY : PLANT PHYSIOLOGY

Day : Wednesday
Date : 13-07-2022

S-18384-2022

Time : 03:00 PM-06:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
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Q.1 Attempt **ANY TWO** of the following : **(12)**

- a) Define Osmosis and demonstrate the phenomenon with experiment.
- b) What is growth? Describe grand period of growth and add note on effect of light on vegetative growth.
- c) Comment on photophosphorylation.

Q.2 Attempt **ANY TWO** of the following : **(12)**

- a) Explain various methods used for the measurement of growth.
- b) What is transpiration? Explain various factors affecting the rate of transpiration.
- c) What is respiration? Describe TCA cycle and its regulation.

Q.3 Attempt **ANY TWO** of the following : **(12)**

- a) Define photosynthesis and explain structure of photosynthetic apparatus with its significance.
- b) Explain process of biological nitrogen fixation and comment on physical nitrogen fixation.
- c) Describe concept and types of antitranspirants.

Q.4 Attempt **ANY THREE** of the following : **(12)**

- a) Describe in brief electron transport pathway in chloroplast membrane.
- b) What is dormancy? Explain physiology of seed dormancy.
- c) What is plasmolysis? Explain hypertonic and hypotonic solutions.
- d) Comment on Crassulacean Acid Metabolism. (CAM)

Q.5 Attempt **ANY FOUR** of the following : **(12)**

- a) Distinguish between exosmosis and endosmosis.
- b) Comment on RQ value.
- c) Write note on vernalization.
- d) Give applications of Gibberellins.
- e) Give significance of transpiration.
