

S.Y.B.SC. SEM – IV (CBCS - 2016 COURSE) : SUMMER - 2018

SUBJECT: BOTANY: PLANT PHYSIOLOGY

Day: **Friday**
Date: **27/04/2018**

Time: **11.00 A.M. TO 02.00 PM**
Max. Marks: 60

S-2018-0671

N.B:

- 1) All questions are **COMPULSORY**
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.

Q.1 Attempt any **TWO** of the following **(12)**

- a) Give path way of water absorption and add note on osmotic absorption of water.
- b) What is transpiration? Give types of transpiration.
- c) Give criteria of essentiality of macro and micro nutrients.

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

- a) Comment on source – sink relationship in transport of organic substances.
- b) Define photosynthesis and explain structure of photosynthetic apparatus.
- c) What is glycolysis and give its significance.

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

- a) What is biological nitrogen fixation? Give various types of organisms involved in this process.
- b) Define growth and give various phases of growth in plants.
- c) What are plant hormones? Comment on practical applications of Auxins and Ethylene.

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

- a) Distinguish between exosmosis and endosmosis.
- b) Define antitranspirants and give its applications in agriculture.
- c) Comment on mineral deficiency in plants with suitable examples.
- d) Explain concept of photoperiodism in plants.

Q.5 Write short notes on any **FOUR** of the following **(12)**

- a) Write note on *nif* gene
- b) Comment of R.Q. value
- c) Give significance of transpiration
- d) Give practical applications of vernalization in plants
- e) Explain external factors affecting on transpiration
- f) Comment on role of gibberellins in agriculture.