PG (CBCS) ODD SEMESTER EXAMINATION, 2022

LIFE SCIENCE & BIOINFORMATICS

3rd Semester

COURSE NO. LISBCC – 301(B)

(Plant Physiology)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer all questions

1. (a) Discuss about the biochemical processes associated with opening and closing of stomata. 6

   (b) With the help of suitable model, describe the process of signal transduction in guard cell. 8

Or

2. (a) Explain symplastic and apoplastic transport mechanism in plants. 6

   (b) How photo assimilates are transported in plants. 8

(Turn Over)

3. (a) Discuss about the structure of photosynthetic reaction center. 7

(b) Differentiate between action and absorption spectra. Add a note on Zablonsky model. 7

Or

4. (a) "Photorespiration is a wasteful as well as useful metabolic process"-Justify. 6

(b) Discuss efficiency in terms of CO_2 fixation in C2, C3, C4 and CAM plants. 6

(c) What is Red Drop? 2

5. (a) Write a brief note on nitrogenase enzyme system. 4

(b) With the help of detail reactions, describe the process of assimilation of ammonia in plants. 10

Or

6. Describe how plant mitigate abiotic stress factors like water, salt and temperature? 14

7. Describe the process of biosynthesis of Auxin and Gibberellin (GA). 7+7=14

Or

8. (a) Discuss about the signal transduction mechanism of gibberellin (GA) and abscisic acid (ABA). 5+5=10

(b) How auxin helps in expansion of plant cell wall? 4

9. (a) Write note on mechanism of action of phytochrome. 7

(b) Describe how endogenous clock is regulated in plants. 7

Or

10. Write notes on the following: 7x2=14

(a) Floral gene

(b) Molecular events in plant scenesense.

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