

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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B.A./B.Sc. (General) 6th Semester

1059

BOTANY

Paper-A : Plant Physiology—II

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Attempt **five** questions in all. Question No. **1** is compulsory consisting of **12** marks. Attempt **4** more questions selecting one from each Unit.

1. Multiple Choice Questions :—

(a) O_2 evolved during photosynthesis comes from :

(i) CO_2

(ii) H_2O

(iii) Glucose

(iv) Air

(b) In Protoplasmic Respiration, the substrate is :

(i) Starch

(ii) Fats

(iii) Proteins

(iv) All

(c) Which hormone overcomes Apical Dominance ?

(i) Cytokinin

(ii) Ethylene

(iii) Gibberellin

(iv) ABA

(d) The part of plant used for culturing is called :

- | | |
|---------------|--------------|
| (i) Starter | (ii) Explant |
| (iii) Deplant | (iv) Tissue |

(e) Trap centre in photosystem is made up of :

- | | |
|-------------------|--------------------|
| (i) Carotene | (ii) Chlorophyll a |
| (iii) Xanthophyll | (iv) Chlorophyll b |

(f) RQ is less than 1 in case of :

- | | |
|---------------------|----------------------------|
| (i) Glucose | (ii) Fats |
| (iii) Organic Acids | (iv) Anaerobic respiration |

Fill in the blanks :—

(g) The radiation between 400–700 nm is called ____.

(h) The name of Bakanae Disease is associated with hormone namely ____.

(i) The site of oxidative phosphorylation is ____.

(j) The place on DNA where Replication is initiated ____.

(k) Actual phase of growth is the phase of ____.

(l) Photo receptor organ in Plants is ____.

12×1=12

UNIT—I

2. (a) Describe C_4 Cycle for CO_2 fixation. 3

(b) Write differences between C_3 & C_4 cycle/plants. 3

3. Write notes on :—

(a) H_2O and Evolution of O_2

(b) Significance of Photosynthesis. 3+3

UNIT—II

4. Explain the major steps in Krebs's Cycle. Write its energy output. Why is it called Citric acid or Tricarboxylic Acid Cycle ? 6
5. Write notes on :—
 - (a) Respiratory Substrates
 - (b) Fermentation
 - (c) Biological Energy Currency. $3 \times 2 = 6$

UNIT—III

6. Describe various types of Vital Movements in Plants with examples. 6
7. Write short notes on :—
 - (a) Phases of Growth
 - (b) Auxins as selective weedicide
 - (c) Bolting. $3 + 1.5 + 1.5$

UNIT—IV

8. Describe briefly process and applications of Tissue Culture. 6
9. Write notes on :—
 - (a) Definition and principles of Bio-Technology.
 - (b) Protoplast Culture. $3 + 3$