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SEAT No. \_\_\_\_\_

No. of Printed Pages: 02

SARDAR PATEL UNIVERSITY  
M.Sc Integrated Biotechnology(IGBT) - V<sup>th</sup> (05) Semester  
Subject Code & Subject: PS05CIGB06- PLANT PHYSIOLOGY

Date: 03-05-2018, Thursday Time: 10: 00 A.M TO 01: 00 P.M Total Marks: 70

Note: (1) All questions are compulsory. (2) Figure to right indicates marks.

Q-1. Answer the following objective questions. 1x8= 08

1. Loss of water from aerial parts in the form of water vapours is called as.....  
(A) Transpiration (B) Guttation (C) Evaporation (D) Vaporation
2. The water molecule are polar in nature and are .....  
(A) Negative charged (B) Neutral (C) Positively charged (D) Both (A) and (B)
3. Photosynthesis is.....  
(A) Catabolic process (B) Amphibolic process (C) Anabolic process (D) None of the above
4. Which of the following is not found in chloroplasts?  
(A) Bacteriochlorophyll (B) DNA (C) Ribosomes (D) Carotenoids
5. Fruit ripening hormone is.....  
(A) Auxin (B) Ethylene (C) Kinetin (D) Gibberellic acid
6. The primary physiological effect of auxin in plant is.....  
(A) Cell division (B) Root formation (C) Elongation of cell in shoot (D) Elongation of internode
7. Which of the following is not vital movements?  
(A) Hygroscopic movement (B) Movement of locomotion (C) Movement of curvature (D) All of above
8. Sensitive plant (*Mimosapudica*) exhibit,..... movemet.  
(A) Nyctinastic (B) Seismonastic (C) Photonastic (D) Thigmonastic

Q-2. Answer the following (Any Seven). 02X07=14

1. Write the advantages of Imbibition.
2. Define the Diffusion and Plasmolysis.
3. Write the difference between C<sub>3</sub> and C<sub>4</sub> Plants.
4. What are the different types of photosynthesis pigment.
5. Write the application of Vernalization.
6. Brief note on Sigmoid curve.
7. Write the difference of movement of locomotion and movement of curvature.
8. Enlist the different types of stress observed in the plants.
9. Define the plant movement with suitable example.

P.T.O

Q-3 (A). Discuss the external factors affecting water absorption. (06)

(B). Discuss the ion-exchange theory and carrier concept theory. (06)

OR

(B). Write a short note on Transpiration. (06)

Q-4 (A). Enlist the factor affecting photosynthesis. Discuss any three factors. (06)

(B). What are the types of Pigments? Discuss any two pigments. (06)

OR

(B). Write a short note on Photosynthesis apparatus. (06)

Q-5 (A). Discuss the physiological effects and practical application of Ethylene. (06)

(B). Write a short note on Auxin. (06)

OR

(B). Enlist the classification of plants based on photoperiods. Discuss any two types. (06)

Q-6 (A). Discuss the different types of movements of curvature in plants. (06)

(B). Write short note on (A) Nastic movement (B) Tactic movement (06)

OR

(B). Give a brief note on drought resistant and cold resistant inplants. (06)

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