

- Which one of the following is used for measuring the rate of transpiration?
 - Moll's experiment
 - Ganong's potometer
 - Auxanomete
 - Respirometer
- In plant nutrition elements are classified as major or minor depending on
 - Their availability in the soil
 - Their relative production in the ash obtained after burning the plants
 - The relative amounts required by the plants
 - Their relative importance in plant growth
- Who discovered photophosphorylation?
 - Arnon *et. al.*
 - Von Mayer
 - Clavin *et.al.*
 - Hill
- Carbon dioxide is necessary for photosynthesis. The chemical used to remove this gas most effectively from entering a control apparatus is
 - calcium oxide
 - distilled water
 - potassium hydroxide solution
 - sodium carbonate.

- e. Photorespiration, usually occurs in
 (i) one cell organelle (ii) two cell organelles
 (iii) three cell organelles (iv) four cell organelles
- f. Which of the following, one element has not been proved to be essential in plants
 (i) Potassium (ii) Sodium
 (iii) Zinc (iv) Iron
- g. Which of the following is not required in the synthesis of fatty acids?
 (i) Acetyl-CoA (ii) Biotin
 (iii) HCO_3^- (CO_2) (iv) NADH
- h. The rate-limiting step in fatty acid synthesis is.
 (i) condensation of acetyl-CoA and malonyl-CoA. (ii) formation of acetyl-CoA from acetate.
 (iii) formation of malonyl-CoA from malonate and coenzyme A. (iv) the reaction catalyzed by acetyl-CoA carboxylase.
- i. _____ are the elements, without which, the plants will not be able to complete its life cycle.
 (i) Fertilizers (ii) Microelements
 (iii) Macroelements (iv) Essential elements
- j. _____ is a technique where the plants are grown with their roots suspended in the air.
 (i) Osmosis (ii) Aerophytes
 (iii) Aerosolization (iv) Aeroponics

Q4. Write True or False against each statement

(0.5 x 10 = 5 Marks)

- Kinetin is the first naturally occurring cytokines.
- Growth regulators, which control plant growth and development are called photomorphogenesis.
- In Alcoholic fermentation carbon dioxide is released.
- Photosynthesis provides almost all of the energy used by living things on Earth.
- The avena curvature is used for bioassay of IAA.
- Auxin stimulates on the shaded side, stimulating greater cell elongation there.
- Phototropic curvature is the result of uneven distribution of auxin.
- Auxin hasten maturity period in juvenile conifers, gibberellins controls xylem differentiation and ABA increases the tolerance of plants to various stresses.
- Gibberellic acid increased the yield of sugar by increasing the length of stem in sugarcane.
- Natural cytokinin are not found in root hair zone.

PART – B

Attempt ANY FIVE questions. All question carries equal marks

(6 x 5 = 30 Marks)

- What is common in respiration and photosynthesis? Explain.
- How are the electron transport chains of respiration and photosynthesis similar?
- Discuss the process in which diffusion takes place through a selective permeable membrane.
- Discuss the statement “growth is measurable”.
- Describe transpiration opening and closing of stomata briefly.
- What do you understand by the term development? Explain the sequence of development process in a flowering plant.

-‘END OF PAPER’-