

Botany (Hons.) Paper-VII

Answer five questions, selecting two from each Group, in which Q.No. 1 is compulsory.

1. Write the correct answer from the given multiple choice for each questions :
- (a) Diffusion Pressure Deficit is : LNMUonline.com
(i) Inversely proportional to suction pressure
(ii) Directly proportional to suction pressure
(iii) Synonymous to suction pressure (iv) None of the above
- (b) Nickel deficiency in plants results in :
(i) Necrosis of leaf tips (ii) Chlorosis of leaves
(iii) Both Chlorosis and Necrosis of leaves (iv) None of the above
- (c) Pheophytin is a chlorophyll in which central Mg^{++} atom is replaced by :
(i) Iron atom (ii) Two hydrogen atom (iii) An oxygen atom (iv) None of the above
- (d) Flow of electrons from doner to acceptor molecule in electron transport chain occurs along :
(i) Decreasing redox potential value (ii) Increasing redox potential value
(iii) Both (i) and (ii) (iv) None of the above
- (e) Which of the following is antiauxin ?
(i) 2, 4 Dichlorophenoxy acetic acid (ii) 2, 3, 5 Triodobenzoic acid
(iii) 2, 4, 6 Trichlorophenoxy acetic acid (iv) All of the above
- (f) Ecologically fixed and genetically irreversed species are called :
(i) Ecotone (ii) Ecological equivalents (iii) Ecotype (iv) None of the above
- (g) Storage capacity of a soil is the extent to which it can hold :
(i) Gravitational water (ii) Capillary water
(iii) Hygroscopic water (iv) Capillary water and hygroscopic water
- (h) Which ecosystem has highest productivity ?
(i) Pond ecosystem (ii) Lake ecosystem
(iii) Grassland ecosystem (iv) Forest ecosystem
- (i) Factors governing the structure of earth surface :
(i) Topographic factor (ii) Biotic factor (iii) Edaphic factor (iv) Temperature
- (j) In the xerosere, the pioneers are :
(i) Bryophytes (ii) Pteridophytes (iii) Lichens (iv) Grasses

Group-A

2. Give an account of oxidative phosphorylation.
3. Define Photosynthesis. Explain it in terms of oxidation-reduction reactions. Describe the steps of biochemical reactions in Calvin Cycle.
4. Describe the mechanism of stomatal movement in the light of modern concept.
5. Write explanatory notes on any two of the following :
(a) Macronutrients and their major functions
(b) Tropic Movements (c) Physiology of flowering (d) Hill's reaction
6. Write short notes on any three of the following : (a) Respiratory Quotient (b) Photorespiration (c) Abscission (d) Cytokinins (e) Circadian rhythm

Group-B

7. Describe the major vegetational belts in India.
8. What is Green House Effect ? How it is responsible for Global Warming ?
9. What is water pollution ? Describe the causes, effect and control measures of water pollution.
10. Write short notes on any four of the following : LNMUonline.com
(a) Biogeochemical Cycle (b) Conservation of biodiversity (c) Xerosere (d) Ozone depletion (e) Ecotype (f) Photochemical smog