

# Plant physiology

Business



Dr. K. Vani Manohar Senior Faculty Sri Chaitanya Educational Institutions  
Hyderabad II Year – Unit III – Plant Physiology (Metabolic aspects) This part of Plant physiology carries 20 marks. Usually two VSAQ (2 marks questions), two SAQ (4 marks questions) and one LAQ (8 marks question) are asked. As it carries more marks, one has to concentrate much on this part of plant physiology.

Very Short Answer Questions (2 marks) 1. Define Holoenzyme and Apoenzyme. June – 2010 Ans: The protein part of a conjugated enzyme is called as apoenzyme. The cofactor and apoenzyme of conjugated enzyme together called as Holoenzyme. 2. Name the pigment present in nodules of Legumes and mention its function.

June – 2010 Ans: The pigment is Leg. haemoglobin. It helps in controlled supply of oxygen to the bacteria to protect the nitrogenase of bacterium from oxygen destruction. 3. Define the turnover number of Enzyme.

March – 2010, May – 2009 Ans: It is number of substrate molecules converted to its products by one enzyme molecule in one minute. 4. What is the 'Richmond-Lang effect'? March – 2010 Ans: Delay of senescence of leaves by application of cytokinins is called as Richmond-Lang effect. It is due to synthesis of chlorophyll, prevention of degradation of chlorophylls, nucleic acids and proteins. 5.

What is the function of t-RNA in protein synthesis? May – 2009 Ans: t-RNA carries the amino acids to the surface of ribosomes during protein synthesis. 6. Define inductive resonance. March – 2009 Ans: It is a process by which the

absorbed light energy by pigment molecules of Light harvesting complex transferred to the reaction centre. .

What is meant by bolting? Which hormone causes bolting. March- 2009 Ans: Bolting is sudden elongation of condensed axis of plant prior to flowering. It is caused by Gibberellin. 8. Define Emerson's enhancement effect along with red drop effect. Ans: Decrease in photosynthetic rate when a photosynthetic organism is subjected to only longer wave length of red light ( $> 680\text{nm}$ ) is called as Red drop.

Increase in photosynthetic rate when the organism is exposed simultaneously both longer and shorter wavelengths of red light (