KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Forestry Degree Programme 2013 Admission
VIth Semester Final Examination-July 2016

Cat. No: Tpbr.3209 **Marks: 50.00**
Title: Forest Ecophysiology (2+1) **Time: 2 hours**

I Fill up the blanks/Define/State True or False. **(10 x 1 =10)**

1. Canopy productivity of forest is the exponential function of _____
2. Elevated CO_2 _____ the photosynthetic efficiency of tree crops
3. Small chloroplasts are the characteristic feature of _____ plants
4. The major green house gas causing global warming is _____
5. Define NPP
6. Woody savannas is an example of sparse and parkland forest (True/False)
7. Translocation of nutrients takes place through _____ tissues
8. Transpiration is measured using the _____ instrument
9. The present atmospheric concentration of CO_2 is _____ ppm
10. The photo synthetically active radiation ranges from _____ to _____ mm of the electromagnetic spectrum.

II Write short notes on ANY FIVE **(5 x 2 =10)**

1. Canopy architecture.
2. Interaction of light and nutrients on photosynthesis.
3. Different pathways of absorption of water by plants
4. Significance of osmosis.
5. Cyclic and Non-cyclic photophosphorylation.
6. Canopy photosynthesis.
7. Microclimate of forest.

III. Explain ANY FIVE of the following **(5 x 4 =20)**

1. Optical properties of forest canopies.
2. Tropical moist and deciduous forest.
3. Differentiate between sun and shade plants
4. Temperature tolerance mechanism in plants
5. Explain the distribution of assimilates in trees with reference to phloem loading and unloading.
6. Calcicoles and Calcifuges
7. Geography and climate of forest ecosystem

IV. Write essay on ANY ONE **(1 x 10=10)**

1. What is drought and how the plant overcome this stress by drought avoidance and tolerance mechanism
2. Explain the light interaction models of forest canopies

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