



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Sc. (Hons.) Forestry 2016 Admission**  
**III Semester Final Examination-February-2018**

Fbti.2105

**Tree Improvement (2+1)**

**Marks: 50**  
**Time: 2 hours**  
**(10x1=10)**

**I Fill in the blanks:**

- 1 Interactions among gene loci is known as -----
- 2 Surendran et. al. are editors of the book entitled -----
- 3 The particular year in which the heavy seed production takes place is commonly known as -----
- 4 Breeding value is double of -----
- 5 Institute of Forest Genetics and Tree Breeding is located at -----

**State True or False**

- 6 Offspring that have one or both parent common is termed as Siblings.
- 7 Tree improvement programmes are generally short term.
- 8 Mutation is the sudden changes in genotype usually caused by a small change in DNA.
- 9 Provenance is the source of a place of origin of the reproductive material.
- 10 Transfer of pollen grains from one flower to another on the same plant is called Autogamy

**II Write Short notes on ANY FIVE of the following**

**(5x2=10)**

- 1 Cryopreservation
- 2 Heritability
- 3 Back cross breeding
- 4 Provenance trail
- 5 Differentiate between CSO and SSO.
- 6 Objective of tree improvement
- 7 Clonal seed orchard

**III Answer ANY FIVE of the following**

**(5x4=20)**

- 1 Diallel mating designs and its limitations.
- 2 Seed orchards and its types.
- 3 Advantages and disadvantage of hybridization in forestry
- 4 Conservation of forest trees germplasm.
- 5 Explain the steps involved in Plus Tree selection.
- 6 Write in brief about breeding for wood property.
- 7 Differentiate between an elite tree and check tree.

**IV Write an essay on ANY ONE of the following**

**(1x10=10)**

- 1 Write note on vegetative propagation methods and their application in forest tree species.
- 2 Explain the planning and designs of seed orchards with proper schematic representation or equation.

\*\*\*\*\*