

KERALA AGRICULTURAL UNIVERSITY

BS.c (Hons) Forestry 2015 Admission

3rd Semester Final Examination-February - 2017

Q. No: Tpbpr. 2106

Q. : Principles of Tree Improvement (2+1)

Marks: 50

Time : 2 hours

Choose the correct Answer:

(10 x 1=10)

1. The seed orchard established using grafted plant is
 - a) Clonal seed orchard
 - b) Seedling seed orchard
 - c) Extensive seedling seed orchard
 - d) None of the above
2. The exotic tree which has natural hybrids in India
 - a) Casuarina
 - b) Eucalyptus
 - c) Silver Oak
 - d) Acacia
3. An individual having more than two basic sets of chromosomes
 - a) Autopolyploids
 - b) Allopolyploids
 - c) Polyploids
 - d) Amphidiploids
4. In cross pollinated species a true breeding line obtained by continuous inbreeding
 - a) Variety
 - b) Hybrid
 - c) Inbred
 - d) Synthetic variety
5. The growth hormones used for shoot multiplication under invitro condition are collectively called as
 - a) Auxins
 - b) Cytokinins
 - c) Gibberellins
 - d) Vitamins
6. A plant with functional pollen fails to set seed when self pollinated
 - a) Sterility
 - b) Incompatibility
 - c) Gamete abortion
 - d) Genetic barrier
7. In tree improvement programme many cycles of selection and breeding refers to
 - a) Tandom selection
 - b) Independent culling
 - c) Selection index
 - d) Recurrent selection
8. The force that increase variation in trees in
 - a) Mutation
 - b) Migration
 - c) Genetic drift
 - d) Selection
9. Plus tree selection method used in an even aged stand
 - a) Baseline selection
 - b) Comparison tree selection
 - c) Regression selection
 - d) Mother tree system
10. Isolation, introduction and expression of foreign DNA in plants is called as
 - a) Gene cloning
 - b) Genetic Engineering
 - c) Transgenic breeding
 - d) Gene splicing

Write short notes on ANY FIVE:

(5x 2=10)

1. Seed production area.
2. Recurrent selection.
3. Mass selection.
4. Heritability and its application.
5. Objectives of tree breeding.
6. Genetic engineering.
7. Specific Combining ability and its utility in tree improvement.

III Write answers on ANY FIVE:

1. Why variation is important in forestry and explain.
2. Write the tree improvement programme against pest and disease resistance.
3. Explain in detail about selection methods in unevenaged forest.
4. Advantage and disadvantage of tree improvement.
5. What is mutation breeding-Discuss.
6. What is incompatibility and explain.
7. Discuss about provenance in tree breeding.

IV. Write essay on any ONE

(1 x 10=10)

1. Explain in detail about reproductive systems in self and cross pollinated tree species.
2. Describe various methods of selection in forest tree improvement.
