

B.Sc. 3rd Semester (Honour's) Examination-2021
FORESTRY

Course ID: 33505

Course Code: **SH/FST/FB 2103**

Course Title: Tree Improvement

Time: 2 Hours

Full Marks: 50

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

- I. Write a definition or one sentence answer any 10 of the following 1x10=10
1. What is genotype?
 2. Name one exotic plant of medicinal importance.
 3. What is seed zone?
 4. Pollination
 5. Back cross
 6. What is anthesis?
 7. Name one ionising mutagen
 8. Mention the minimum size for seed production area.
 9. Seed orchards
 10. Seed germination
 11. Seed health
 12. Importance seed treatment
 13. Provenance
 14. Scissor
 15. Name one chemical mutagen.
- II. Write short note/ define any 10 of the following 2x10 =20
1. What is meant by in genetic gain?
 2. What do you mean by gene pool?
 3. What is meant by biodiversity?
 4. Seed
 5. What is geitonogamy?
 6. What is reciprocal cross?
 7. What do you mean by recurrent selection?
 8. Plus tree
 9. What is genetic drift?
 10. What do you mean by 'stand' in forestry?

11. What is adaptive fitness?
12. Why vector is used in molecular cloning?
13. What is artificial seed?
14. Geographic variation
15. What is ploidy breeding?

III. Write down in brief any four of the following

5x4=20

1. Why selection of seed orchards is important for seed collection? Explain different criteria for seed orchards selection? 2+3
2. How knowledge of biotechnology can be deployed for tree improvement?
3. What is pollination? Discuss on brief their importance in tree breeding? 1+4
4. Explain the terms provenance and seed source. How provenance test can be converted to SAP. 2+3
5. How provenance test can be converted to seed production area?
6. Why emasculation is necessary? Describe different types of emasculation process for hybridisation. 2+3