

B.Sc. 5th Semester (Honours) Examination- 2021
FORESTRY

Course ID: 53505

Course Code : SH/FST/BS3107

Course Title: **Plant Cytology and Genetics**

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 hypostatic gene?
 2. Mention two characters of incomplete dominance
 3. Mention two quantitative traits
 4. Write down back cross
 5. Define linkage group
 6. Two major function of RNA
 7. Define exon
 8. What is the significance of back cross?
 9. Two major function of cell membrane
 10. Function of helicase enzyme
 11. What is regulator gene?
 12. Mention two function of SER
 13. What is splicing?
 14. What are stop codons?
 15. What is repulsion stage?
- II. Write short note/ define any 10 of the following 2x10 =20
1. What is polyribosome?
 2. Write a short note multiple allelism
 3. Difference between DNA and RNA
 4. What is monosomy and nullisomy?
 5. What is cheek point?
 6. What okazaki fragments?
 7. Mention two importance of mutation
 8. What is test cross?
 9. Mention two significance of crossing over
 10. What is polycistronic mRNA?
 11. What is g₀ phase?
 12. What is nucleotide?
 13. What is constitutive heterochromatin?

14. What is telomere ?

15. What is pleiotropic gene?

III. Write down in brief any four(4) of the following

5x4=20

1. Discuss the mitosis process with diagram.
2. Define Chromosomes. Write a short notes on itsstructure and function.
3. What is polygenic inheritance, mention two characteristic of cytoplasmic inheritance
4. Draw and describe nucleosome model
5. Difference between A DNA and Z DNA
6. Write a short note about initiation process of translation