

# Bankura University

B.Sc 3rd SEMESTER(Honours) EXAMINATIONS, 2021

Subject: BOTANY

Course ID: 31313

Course Code: SHBOT/303/C-7

Course Title: **Genetics**

Full Marks: 25

Time: 1 h 15 min

The figures in the margin indicate full marks

Answer all the questions.

## UNIT-I

**1. Answer any five of the following.**

**1x5 = 5**

- What is pseudoallele?
- what is lethal gene?
- What do you mean by dosage compensation ?
- What is position effect?
- What is Kappa particles?
- what do you mean by  $2n + 1 - 1$ ?
- Define allele frequency.
- what is homeologous chromosome?

## UNIT-II

**2. Answer any two of the following.**

**5x2 = 10.**

- Distinguish between double monosomy and nullisomy. Draw and describe different types of trisomics.
- Describe the classical concept of a gene .
- What are amphidiploids? State the evolution of allotetraploids with suitable examples.
- Distinguish between recessive and dominant epistasis with example.

## UNIT-III

**3. Answer any one of the following.**

**10x1 = 10.**

- Describe the UV induced mutation and its repair mechanism. Name two unusual bases of RNA.
- How does Linkage differ from Mendel's Law of Independent assortment? With neat sketches explain cytological basis of crossing over.