BACHELOR OF SCIENCE (CBCS-2018 COURSE)
T. Y. B. Sc. Sem-V : WINTER :- 2021
SUBJECT: BOTANY : GENETICS & BIOSTATISTICS

Day : Thursday
Date 27-01-2022

W-18425-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 60

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Draw neat labelled diagram **WHEREVER** necessary.

Q.1 Attempt **ANY TWO** of the following **(12)**

a) Describe coupling and repulsion phases in linkages.
b) Explain Back Cross and Test Cross with suitable example.
c) Describe mean deviation and standard deviation of biostatistics.

Q.2 Attempt **ANY TWO** of the following **(12)**

a) Give concept and characters of multiple alleles.
b) Explain central value and dispersion of biostatistics.
c) Describe deletion and translation.

Q.3 Attempt **ANY TWO** of the following **(12)**

a) Explain plasmid transmission in *Mirabilis jalapa*.
b) Describe quantitative genetics.
c) Explain Mendel's Law of Segregation with suitable example.

Q.4 Attempt **ANY THREE** of the following **(12)**

a) Describe significance of statistics in genetics.
b) Explain epistatic factors in gene interactions.
c) Describe induced mutations.
d) Explain types of duplication.

Q.5 Attempt **ANY FOUR** of the following **(12)**

a) Give cytoplasmic inheritance.
b) What is male sterility in plants?
c) Give multiple factor hypothesis.
d) Describe standard error in brief.
e) Explain frame-shift mutation.
f) Describe coefficient of variation.

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