BACHELOR OF SCIENCE (CBCS - 2016 COURSE)
T. Y. B Sc. Sem-V : WINTER- 2022
SUBJECT : BOTANY : GENETICS & BIOSTATISTICS

Day : Wednesday | Time : 02:00 PM-05:00 PM

Date : 14-12-2022 | **W-14953-2022** | Max. Marks : 60

N. B. :

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

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

a) Explain plastid transmission in *Mirabilis jalapa.*

b) Describe quantitative genetics.

c) Explain Mendel's Law of segregation.

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

a) Describe coupling and repulsion pluses in Linkages.

b) Explain back cross and test cross with suitable examples.

c) Describe mean deviation and standard deviation of biostatistics

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

a) Describe concept and characters of multiple alleles.

b) Explain central value and dispersion of biostatistics.

c) Describe deletions and translocation.

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) Give definition of cytoplasmic inheritance.

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

a) Explain type of duplications.

b) Give multiple factor hypothesis.

c) What is male sterility in plants?

d) Explain coefficient of variation.

e) Give significance in chromosome mapping.

f) Give the role of colchicine in mutation.

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