

**T.Y.B.SC. SEM – V (2014 Course) : WINTER - 2018**  
**SUBJECT : BOTANY : GENETICS & BIOSTATISTICS (B – 54)**

Day : Monday  
Date : 15/10/2018

**W-2018-0842**

Time : 12.00 NOON TO 02.00 PM  
Max. Marks : 40

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**N.B.:**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
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- Q.1** Attempt **ANY TWO** of the following: [10]
- a) Describe deletions and translocations.
  - b) Explain central value and dispersion of biostatistics.
  - c) Describe concept and characters of multiple alleles.
- Q.2** Attempt **ANY TWO** of the following: [10]
- a) Describe mean deviation and standard deviation of biostatistics.
  - b) Explain back cross and test cross with suitable examples.
  - c) Describe coupling and repulsion phases in linkages.
- Q.3** Attempt **ANY TWO** of the following: [10]
- a) Explain Mendel's Law of segregation.
  - b) Describe quantitative genetics.
  - c) Explain plastid transmission in *Mirabilis Jalapa*.
- Q.4** Attempt **ANY FIVE** of the following: [10]
- a) What is male sterility in plants?
  - b) Give multiple factor hypothesis.
  - c) Explain types of duplications.
  - d) Give definition of cytoplasmic inheritance.
  - e) Describe induced mutations.
  - f) Explain epistatic factors in gene interactions.
  - g) Describe significance of statistics in genetics.

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