

**T.Y.B.SC. SEM – V (CBCS - 2016 Course) : SUMMER - 2019**

**SUBJECT: BOTANY: GENETICS AND BIOSTATISTICS**

**Day:** Thursday  
**Date:** 02/05/2019

**S-2019-0872**

**Time:** 11.00 A.M. To 02.00 P.M.  
**Max. Marks: 60**

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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: (12)

- a) Explain multiple alleles in plants (self- incompatibility).
- b) Give characters of multiple alleles.
- c) Explain descriptive statistics.

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

- a) Explain theories of linkage and detection of linkage.
- b) Describe multiple factor hypothesis.
- c) Explain interference and Co-efficient of coincidence.

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

- a) Describe coupling and repulsion phases.
- b) Give concept of cytoplasmic inheritance and plastids transmission in plants.
- c) Explain coefficient of variation and standard error.

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

- a) Explain meiosis in structural heterozygotes.
- b) Describe central value and desparation in biostatistics.
- c) Explain spontaneous mutations.
- d) Give concept of standard error.

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

- a) Describe induced mutations.
- b) What is Back cross and Test cross in plants.
- c) Give the concept of monohybrid ratio and dihybrid ratio.
- d) Explain deletion and inversions change in chromosome structure.
- e) Give concept of quantitative traits in genetics.

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