

T.Y.B.SC. SEM – V (2014 COURSE) : WINTER - 2017

SUBJECT: BOTANY: GENETICS & BIOSTATISTICS

Day: Monday
Date: 30/10/2017

W-2017-0657

Time: 3:00 P.M. TO 5:00 P.M.
Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Neat labelled diagram should be drawn **WHEREVER** necessary.

Q.1 Attempt any **TWO** of the following: **(10)**

- a) Describe Mandel's law of Segregation.
- b) Explain multiple factor hypothesis.
- c) Comment on male sterility in plants.

Q.2 Attempt any **TWO** of the following: **(10)**

- a) Explain plastid transmission in *Mirabilis jalapa*.
- b) Describe the effects of duplications.
- c) Define mutation. Give various types of mutagens.

Q.3 Attempt any **TWO** of the following: **(10)**

- a) Describe mean deviation and standard deviation.
- b) Explain linkages in Maize.
- c) Describe characters of multiple alleles.

Q.4 Attempt any **FIVE** of the following: **(10)**

- a) Explain back cross with suitable example.
- b) Give significance of chromosome mapping.
- c) Explain concept of cytoplasmic inheritance.
- d) What is induced mutations?
- e) Explain the effects of deletions.
- f) What is significance of coefficient of variations?
- g) Explain central value in biostatistics.

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