

C 63022

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Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2019

(CUCSS)

Botany

BO02CT06—CYTOGENETICS, GENETICS, BIostatISTICS, PLANT BREEDING AND EVOLUTION

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

I. Answer the questions very briefly ($14 \times 1 = 14$ weightage ; grades A, B, C, D, E) :

- 1 What is meant by Robertsonian translocation ?
- 2 Write notes on Chi-square test.
- 3 Define Hardy Weinberg law.
- 4 Comment on Karyotype.
- 5 Write an account on *In situ* hybridization.
- 6 Give the importance of Lod score analysis.
- 7 State the features of Ac Ds system.
- 8 What is meant by Type I and Type II errors ?
- 9 Give an account on Plant introduction.
- 10 Comment on quality breeding.
- 11 Write notes on modern synthetic theory of evolution.
- 12 What is cryopreservation ?
- 13 Give the features of CRD.
- 14 What is interference ? How this can be calculated ?

II. Answer any *seven* questions in not more than 100 words ($7 \times 2 = 14$ weightage ; grades A, B, C, D, E)

- 15 Give the principle and application of flow cytometry.
- 16 Mention the basic principles of the design of experiment.

Turn over

- 17 Give the features of cytoplasmic male sterility.
- 18 Comment on statistical softwares.
- 19 What are the different measures of central tendency ?
- 20 Write notes on polygenic inheritance.
- 21 Give the basic features of transformation mapping in bacterium.
- 22 Write notes on the different theorems of probability.
- 23 Write in detail about sampling techniques.
- 24 Give an account on different theories of evolution.

III. Answer any *two* questions in 300 words each ($2 \times 4 = 8$ weightage ; A, B, C, D, E) :

- 25 Write an account of structural chromosome aberrations and their significance in evolution.
- 26 Describe the different types of transposable elements.
- 27 Write an account of different measures of dispersion studies by you.
- 28 Give an account of resistance breeding.