

**19P230**

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Name.....

Reg. No.....

**SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2020**

(CUCSS - PG)

**CC19P BOT2 C07 - CYTOGENETICS, GENETICS, BIOSTATISTICS, PLANT  
BREEDING AND EVOLUTION**

(Botany)

(2019 Admissions: Regular)

Time: Three Hours

Maximum:30 Weightage

I. Answer any *four* questions. Each question carries 2 weightage.

1. What do you mean by resistance breeding?
2. What are the types of pre- reproductive isolations?
3. What is/are the difference between standard deviation and standard error?
4. Describe QTL mapping.
5. Significance of B Chromosomes
6. What do you mean by Broad Sense Heritability?
7. What does flow cytometry tell us?

**(4 x 2 = 8 Weightage)**

II. Answer any *four* questions. Each question carries 3 weightage.

8. How Lod Score can help in predicting Linkage in Humans?
9. How Molecular markers help in various plant breeding techniques?
10. What are the functions of Lampbrush chromosomes and why it is important?
11. Recently a minister had claimed that Darwin's theory of evolution of man was "scientifically wrong" as no one saw an ape turn into a man. What's wrong in this statement?
12. The driver of biological evolution: genetics or ecology. Comment on your views
13. Why can't retrotransposons move from one cell to another like retroviruses can?
14. What are the factors affecting genetic equilibrium in a population?

**(4 x 3 = 12 Weightage)**

III. Answer any *two* questions. Each question carries 5 weightage.

15. Since genes are packed into chromosomes, abnormal chromosomes can actually cause genetic diseases. What methods have scientists invented to study these abnormalities?
16. Design an experiment to find out the genetic map in a Leu+Pro+Trp+Penicillin Resistant Bacteria.

17. Describe how Correlation and Regression analysis helps in concluding our experimental hypothesis?
18. What does the theory of evolution say? Comment this in light of various evidence for evolution.

**(2 x 5 = 10 Weightage)**

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