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GIET UNIVERSITY, GUNUPUR – 765022
M. Sc (Third Semester) Examinations, December' 2020
BTPC302 – GENETICS
(Biotechnology)

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks.)

- Q.1. Answer **ALL** the questions (2 x 10 = 20)
- Differentiate phenotype and genotype
 - What is random genetic drift?
 - What is Dosage compensation?
 - State Hardy–Weinberg Principle.
 - What is segregation?
 - State Mendel's first and second law.
 - What is Nondisjunction?
 - Differentiate Sex-influenced trait and Sex limited trait.
 - What are Heterogametic Males?
 - Write a brief note on Mendel's postulates which he arrived based on monohybrid cross.

PART – B (6 x 5 = 30 Marks)

Answer ANY FIVE questions

Marks

- Describe the phenomenon of linkage by giving suitable examples. (6)
- Explain incomplete and codominance with appropriate examples (6)
- Explain pedigree analysis with an example. (6)
- Discuss inheritance of X-linked recessive genes in human in relation to colour blindness (6)
- Comment on monozygotic and dizygotic twins. (6)
- Explain sex determination in humans. (6)
- Give an account on chromosomal inversion and translocation. (6)
- Explain the technique of FISH (6)

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