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**GIET UNIVERSITY, GUNUPUR – 765022**

M. Sc.(First Semester) Examinations, May – 2021

20BTPC 105 – GENETICS

(Biotechnology)

Time: 2 hrs

Maximum: 50 Marks

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

PART – A**(2 x 10 = 20 Marks)**Q.1. Answer **ALL** questions

- Differentiate genotype and phenotype.
- What is genetic fitness?
- State Hardy–Weinberg Principle.
- What is heterosis?
- What is test cross?
- Give the significance of QTL mapping.
- What is hypomorphy?
- List few phenotype markers.
- Differentiate dominant and recessive gene mutation.
- State the law of segregation.

PART – B**(6 x 5 = 30 Marks)**Answer **ANY FIVE** questions

Marks

- Give an account of genetic mapping in bacteria. (6)
- Explain genetic epistasis. (6)
- Explain Back cross with an example. (6)
- What is genetic drift? Explain. (6)
- Write a brief note on complex traits. (6)
- What is inbreeding? What are its genetic effects? (6)
- Briefly explain gene pyramiding. (6)

--- End of Paper ---