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**GIET UNIVERSITY, GUNUPUR – 765022**  
**M. Sc (First Semester) Examinations, May – 2021**  
**20BTPC103 – Plant and Animal Biotechnology**  
**(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

- a. What is plant cell Totipotency?
- b. Define suspension culture
- c. What is Ri plasmid?
- d. What is molecular pharming? How is it done?
- e. How are industrial enzymes produced?
- f. How can we conserve animals?
- g. What is genomics?
- h. How many genomic databases are in blast?
- i. What is DNA fingerprinting?
- j. What is QTLS?

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

Marks

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| 2. Explain the stages of somatic embryogenesis.  | (6) |
| 3. How are cell cultures used in pharmaceutical research?                                    | (6) |
| 4. What is embryo manipulation? How do you identify a transgenic animal?                     | (6) |
| 5. How endangered species can be conserved?  | (6) |
| 6. How do you do a genome analysis? Which techniques are commonly used in genome sequencing? | (6) |
| 7. Give a brief note on forward genetics techniques  | (6) |
| 8. Write the principles and applications of DNA finger printing                              | (6) |

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