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GIET UNIVERSITY, GUNUPUR – 765022

M. Sc (Third Semester) Examinations, December' 2020

**BTPC301– GENETIC ENGINEERING & r-DNA TECHNOLOGY
(BIOTECHNOLOGY)**

Time: 2hrs

Maximum: 50 Marks

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

Q.1. Answer **ALL** the questions

(2 x 10 = 20)

- What is restriction modification system?
- What are adaptors?
- What are cosmids?
- Define site directed mutagenesis.
- What do you mean by genomic library?
- What are the importance of SNP?
- What is Somatic gene therapy?
- What is RNA interference
- What is automatic DNA sequencing?
- Write two importance of YAC.

PART – B (6 x 5 = 30 Marks)

Answer **ANY FIVE** questions

Marks

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| 2. Describe the specific role of T ₄ DNA polymerase and polynucleotide kinase in genetic engineering. | 6 |
| 3. What are the differences between linker and adaptor DNA? | 6 |
| 4. What are the features of good vector? Describe the characteristics features of one phage vector of <i>E. coli</i> . | 6 |
| 5. Write note on λ- phage vector. | 6 |
| 6. What is RFLP? Describe its role in Genome analysis. | 6 |
| 7. Describe the method of isolation of mRNA and total RNA. | 6 |
| 8. Describe the techniques of Gene silencing. | 6 |
| 9. Write notes on chemical sequencing of DNA. | 6 |

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