

**GIET UNIVERSITY, GUNUPUR – 765022**

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

**LSPC 403 / PSPC 403 – Biotechnology (Special Paper)
(Life Science)**

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks.)**PART – A****(2 x 10 = 20)**Q.2. Answer **ALL** the questions

- a. What is plamid?
- b. What are the three types of restriction enzymes?
- c. Give an example of animal cell culture media
- d. Give an example of plant tissue culture media
- e. What are heterokaryon?
- f. Write the significance of Co2 incubator
- g. Define biopulping
- h. What are the advantages of biotechnology in drug designing
- i. What is protein engineering?
- j. Write the principle of RT-PCR

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

Marks

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| 2. Briefly explain the principle of Southern blotting with diagram | (6) |
| 3. Write the procedure for Maxam and Gilbert's sequencing with diagram | (6) |
| 4. What are the different methods used to create transgenic animals? | (6) |
| 5. Briefly explain the gene and therapeutic cloning | (6) |
| 6. What are the different methods of protoplast fusion | (6) |
| 7. How are haploids produced by antherculture? | (6) |
| 8. Explain the production of lactic acid by microbial fermentation | (6) |
| 9. What are the different types of biosensors and its application? and explain any one of it. | (6) |

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