

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN**  
**SEMESTER END EXAMINATION, JULY 2021**  
**CBCS B.Sc. Zoology (Honours Course)**

**Semester VI**

**ZOD-104: Animal Biotechnology**

**Total Marks: 30    Date: 17/07/2021    Duration: 2 hrs    Total No. of pages: 01**

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**Instructions:** *1. All questions are compulsory.*

*2. Figures to the right indicate marks allotted to the question.*

*3. Illustrate your answers wherever necessary.*

*4. Upload the answer books within the stipulated time*

**Q.1. Answer ANY FIVE of the following:** (5x2)

1. Define the term “Green Biotechnology”. State its significance.
2. What is meant by the bacterial growth curve?
3. What are plasmids? Provide an Example.
4. Comment on M13 vector.
5. What is the importance of the master plate in screening of transformed cells?
6. Why does modern PCR technique use a mixture of *Taq* and *Pfu* polymerase?
7. What is meant by DNA microinjection in terms of transgenesis?
8. List the applications of reverse transcriptase.

**Q.2. Answer ANY FOUR of the following:** (4x5)

1. What are VNTR's? How can they be used in identification of individuals?
2. Explain the process of Sanger DNA sequencing, highlighting the role of Di-deoxynucleotides.
3. What are restriction enzymes? Provide a brief note on Endonucleases.
4. Write a note on fusion proteins.
5. Give a detailed account of Retroviral mediated gene transfer in creation of Transgenic animals.
6. Write a note on ‘Knockout mouse’.