

**RAGHUNATHPUR COLLEGE**  
**DEPARTMENT OF ZOOLOGY**  
**UG SEM V CLASS TEST- 2023**  
**PAPER TITLE: Animal Biotechnology**  
**PAER CODE: BZOODSHC1**

**Full marks : 30**

**Time: 2 Hrs.**

**1. Answer any ten questions from the following: 1×10=10**

- a) Write the full form of YAC.
- b) Write the name of the virus vector which infects bacteria.
- c) What is gene knockout?
- d) Define chimera
- e) What is GMOs?
- f) Write two drawbacks of cloning.
- g) Write two names of transgenic animals.
- h) What are the 4 types of organ donation?
- i) What do you mean by cell line?
- j) What is electroporation?
- k) Mention the source of Taq Pol and state one of its drawback
- l) What is an expression vector? Cite an example.
- m) What are phagemids?
- n) What are LINES and SINES ?
- o) What is DNA microinjection?

**2. Answer any five questions from the following: 2×5=10**

- a) What are the important features of cloning vector?
- b) Mention the importance of Primer in PCR
- c) What is electroporation?
- d) What is blocking? State its significance in western blot.
- e) Name two therapeutic proteins that can be produced in the milk of domestic animals.
- f) Write down the causes of Cystic fibrosis and how can cystic fibrosis be detected through molecular diagnosis?
- g) Differentiate between primary and secondary cell culture
- h) Differentiate between genomic and c-DNA library

**3. Answer any two questions from the following: 5×2=10**

- a) Write a note on the production method of transgenic animals using Nuclear Transplantation with suitable diagrams. Write two significance of transgenic animals  
3+ 2
- b) Write down the principle and methodology of Sanger DNA sequencing
- c) Briefly describe different types of Restriction enzymes with examples.