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**(CBCS Scheme Freshers & Repeaters)**

## Paper: V

**Maximum Marks : 70**

Draw neat labelled diagrams wherever necessary.

(5×2=10)

- (4×5=20)**

- [P.T.O.]



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**SECTION - C**

**III. Answer any three of the following:**

**(3×10=30)**

11. Describe in detail the steps involved in PCR. Add a note on its applications.
12. What is bioremediation? Explain in -situ and ex-situ remediation.
13. Explain in detail symbiotic  $N_2$  fixation in bacteria. Add a note on types of biofertilizers.
14. Write notes on the following:
  - a) Restriction enzymes.
  - b) Expression of cloned DNA in E coli.
15. Explain the steps involved in construction of genomic DNA and CDNA library.

**SECTION - D**

**IV. Answer the following :**

**(10×1=10)**

16. What is pyrolysis?
  17. Name any two organisms used in bioleaching.
  18. Define acidophiles.
  19. Expand TEMED.
  20. Name the vector used in preparation of recombinant HGH.
  21. Write any two demerits of Electroporation.
  22. Expand ddNTP's .
  23. What are cosmids?
  24. Give any two examples of conventional fuels.
  25. What is the function of exonucleases?
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V Semester B.Sc. Degree Examination, April - 2022

**BIOTECHNOLOGY****Immunology and Animal Biotechnology****(CBCS Scheme F+R)****Paper: V****Time : 3 Hours****Maximum Marks : 70****Instructions to Candidates:**

- 1) Draw a neat labelled diagrams. Wherever necessary.
- 2) All the sections are compulsory.

**SECTION - A****I. Write short notes on the following:****(5×2=10)**

1. Adjuvants.
2. Complement system.
3. DNA vaccine.
4. Cell lines.
5. Microinjection

**SECTION - B****II. Answer any four of the following****(4×5=20)**

6. Differentiate between Humoral and cell Mediated Immunity.
7. Discuss the factors affecting antigenicity.
8. What are vaccine? Discuss the production of recombinant vaccine.
9. Define primary cell culture. Add a note on Mechanical Method of Tissue Disaggregation.
10. What are expression vector? Explain with suitable example?

**[P.T.O.]**

**SECTION - C****III. Answer any three of the following:****(3×10=30)**

11. Describe Innate immunity and Acquired Immunity.
12. What are Antibodies? Explain the structure and functions of IgG and IgM.
13. Explain the classical Pathway of Complement system.
14. Explain defined Animal cell culture media Add a note on Balanced Salt Solution.
15. Describe the technical involved in production of Transgenic mice and its applications.

**SECTION - D****IV. Answer the following :****(10×1=10)**

16. Who discovered blood group.
  17. Expand ELISA.
  18. What is Anaphylaxis.
  19. What is Toxoid?
  20. Expand PDGF.
  21. Define Serum.
  22. Expand HAT
  23. Name the enzyme used in Tissue disaggregation.
  24. Who created Dolly the sheep?
  25. Roux Bottle.
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