

Unique Paper Code : 42237903

Name of the Paper: DSE – Animal Biotechnology

Name of the Course: B.Sc. (Prog.) Life Sciences
Examination, 2020-CBCS

Semester : V

Duration : 3 hours

Maximum Marks : 75 Marks

Instructions for Candidates

Write your Roll No., Name of the paper, Course Semester, and Date of examination on the first page of answer sheet.

Attempt **ANY FOUR** questions. **All questions carry equal marks.**

Illustrate your answers with appropriate diagrams wherever necessary.

1. Recombinant DNA Technology is a multidisciplinary science without overlapping boundaries. Discuss this statement with examples. (18.75)
2. Explain the various steps required to clone a gene of interest using pUC19 vector. Briefly explain the nomenclature of plasmid vectors with examples. (18.75)
3. Explain with diagram the technique by which protein identification is done. How it differs from Southern and Northern Blotting? (18.75)
4. What is the role of non-coding DNA region comprising of VNTRs and STRs in the process of DNA Fingerprinting? Add on its significance in forensic sciences. (18.75)
5. What gene manipulation strategies can be adopted for generating herbicide-resistant plants? Elaborate the strategy that was used for creating Roundup Ready crops that were resistant to glyphosate. (18.75)
6. A patient is suffered from a genetic disease that is the result of deletion of phenylalanine at position 508 in CFTR protein. This is the one of the most common lethal autosomal disorders in Europeans and their descendants. What is the name of this disorder? Which

molecular techniques are used to diagnose the occurrence of specific disorder in human at genetic level? Write name of techniques and describe each. (18.75)

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