

4. a) Explain gene transformation and transfection methods

**OR**

b) Give an account on rDNA clones and their expression

5. a) Write in detail the applications of PCR technology

**OR**

b) Discuss various blotting techniques used in gene expression studies

6. a) Give an account on Human Genome Project

**OR**

b) Discuss the applications of genetic engineering in industry

[29/II Y/211]

[Aug-11]

**[SPDBT-202]  
M.Sc. DEGREE EXAMINATION**

**Biotechnology  
II YEAR**

**GENETIC ENGINEERING**

(Effective from the admitted batch 2009-10)

**Time: 3 Hours**

**Max.Marks: 70**

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**Instructions:** All parts of the unit must be answered in one place only.  
Figures in the right hand margin indicate marks allotted.  
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**SECTION-A**

1. Answer any **Four** of the following: (4x5=20)

- a) Reverse transcriptase
- b) pBR 322
- c) Linkers and Adapters
- d) Electroporation
- e) Colony PCR
- f) Somatostatin
- g) Golden rice

**SECTION-B**

Answer all questions: (5x10=50)

2. a) Write about Sanger's method of DNA sequencing

**OR**

b) Write about type II restriction enzymes

3. a) Discuss important features of lambda phage vectors

**OR**

b) Write about BAC and YAC vectors used in gene cloning