

**B.TECH DEGREE EXAMINATIONS: NOV/DEC 2010**

Fifth Semester

**BIOTECHNOLOGY**

U07BT505: Genetic Engineering

**Time: Three hours**

**Maximum Marks: 100**

**Answer ALL Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. In SDS-PAGE, the stacking gel has:
  - a) A higher pH than the separating gel
  - b) The same pH as the separating gel
  - c) A lower pH than the separating gel
2. What is the recognition site of Eco RI?
  - a) GAATTC
  - b) GCATGA
  - c) ACTTGG
  - d) GGATCC
3. What bacteria is the source of the DNA polymerase used in PCR?
  - a) *Thermus aquaticus*
  - b) *Thermoplasma acidophilum*
  - c) *Thermoplasma librum*
  - d) *Bacillus subtilis*
4. What antibiotic resistance genes are found in pBR 322?
  - a) Cam and Kan
  - b) Kan and Tet
  - c) Tet and Amp
  - d) Amp and kan
5. Restriction endonuclease generated DNA fragments separated by gel electrophoresis and blot transferred onto a membrane filter are probed with a radioactive DNA fragment. This procedure is called:
  - a) Gene cloning
  - b) The Southern technique
  - c) The polymerase chain reaction
  - d) Recombinant DNA
6. What is the approximate size of the human genome?
  - a) 3 billion bases
  - b) 4.5 million bases
  - c) 10 billion bases
  - d) 30 billion bases
7. Which of the following is not associated with genetic engineering?
  - a) Translation
  - b) Transformation
  - c) Cloning
  - d) Expression
8. "Gene library" is a term used to describe:
  - a) a computerized listing of known DNA sequences .
  - b) bacteria with plasmids containing DNA fragments representing the majority of the genetic information from a plant or animal.
  - c) a collection of books about recombinant DNA technology.
  - d) a compilation of the amino acid sequences of protein coding genes

