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HG-211 Seat No._____

B.Sc. (Sem. - VI) (Biotechnology) Examination

March / April – 2015

CC - I - 12 - Paper - 12 : Genetic Engineering

Time : 3 Hours] [Total Marks : 70

1 Answer the following. 10

(1) The first engineered plasmid vector is
(A) pBR 322 (B) pUC vector
(C) pSC 101 (D) pUC 19

(2) Extra chromosomal ,double, stranded, circular DNA molecule present in bacteria which is widely used as vector is called
(A) Phagemid (B) Cosmid
(C) Plasmid (D) bacterial vector

(3) Sanger method Growing chains are terminated by
(A) ddNTP (B) dNTP
(C) NTP (D) ATP

(4) Cycle sequencing requires a _____ DNA polymerase.
(A) copper stable (B) Heat stable
(C) pressure stable (D) Acid stable

(5) The first endonuclease discovered was from
(A) Bacillus subtilis (B) Enterobacter
(C) E.coli (D) P. putida

(6) EcoRI comes from which stain of Escherichia coli.
(A) SH 1 (B) RP 13
(C) RK 1 (D) RY 13

(7) YACs can hold up to_____KB nucleotide
(A) 100kb (B) 300kb
(C) 1000kb (D) 500kb

(8) What is the application of Restriction Fragment Length Polymorphism
(A) DNA sequencing
(B) hereditary diseases
(C) variation analysis
(D) all

(9) VNTR is
(A) Veriable Nucleotide RNA
(B) Variety Nucleotide RNA
(C) variable number tandem repeats
(D) variable number RNA

(10) DNA is amplified using
(A) Thermo cycler
(B) Thermo capillary
(C) Chamber Cycler
(D) Chamber

2 Write answer of **any SIX** question 30

(1) Explain Transformation process in Recombination
(2) Explain the structure and Properties of Plasmids pBR 322
(3) Explain Chemical method of DNA sequencing
(4) Explain Pyrosequencing DNA sequencing
(5) Explain Western blotting techniques
(6) Write the Applications of rDNA technology
(7) Write the Medical application of rDNA technology

3 Long Answer **any Three** question 30

(1) Explain Sanger DNA sequencing Method with application
(2) Explain Cloning Vector
(3) Explain RFLP method
(4) Explain PCR method and its Application
