



KC-217

Seat No. _____

Third Year B. Sc. Examination

March / April - 2013

Biotechnology : Paper-VII

(Molecular Genetics & Genetic Engineering)

Time : 3 Hours]

[Total Marks : 70

- 1 (a) Explain initiation of replication in eukaryotes. 7
(b) Write a note on termination of DNA replication in *E.coli*. 7

OR

- (a) Give role of DNA polymerase III, DNA Polymerase α , DNA polymerase I in DNA replication. 7
(b) Explain termination of eukaryotic DNA replication. 7
- 2 (a) Give an account on promoters. 7
(b) Write a note on termination of bacterial transcription. 7

OR

- (a) Write a note on Poly A tail formation. 7
(b) Explain Group I and Group II introns. 7

- 3 (a) Explain gene regulation bacteria using suitable example. 7
(b) Give applications of restriction enzyme in r-DNA technology. 7

OR

- (a) Write a note on Tryptophan operon. 7
(b) Explain plasmid based vectors using suitable example. 7
- 4 (a) Explain Sanger's method of DNA sequencing. 7
(b) Explain gene therapy. 7

OR

- (a) Write a note on applications of biotechnology. 7
(b) Explain method for detection of specific nucleic acid fragment. 7
- 5 Write a note on any two : 14
(a) Human genome project
(b) Application of bioinformatics in biological research
(c) SAGE and 2-D PAGE
(d) Microarray