

6. Write short notes on the following :
- (a) Dam and Dcm methylases
 - (b) BACs
7. A gene was cloned into a plasmid vector and transformed into DH5 α cells. How will you screen for positive clones using restriction mapping ?
8. Write short notes on :
- (a) Transformation
 - (b) Next generation sequencing.

Exam. Code : 206602

Subject Code : 4785

M.Sc. Bioinformatics 2nd Semester
ADVANCED MOLECULAR BIOLOGY & r-DNA
TECHNOLOGY
Paper : BI-521

Time Allowed—2 Hours]

[Maximum Marks—75

Note :—There are **Eight** questions of equal marks. Candidates are required to attempt any **Four** questions.

1. Explain with the help of a diagram how DNA damage is repaired using Nucleotide excision repair mechanism.
2. Write a short note on the following :
 - (a) Protein trafficking
 - (b) RAN transport.
3. What is lac operon ? How does the presence of lactose affect lac operon ?
4. What are miRNAs, siRNAs and piRNAs ? Are they synthesized using the same machinery ?
5. What is PCR ? How can it be used in diagnosis of a genetic disease ?