

**2015**  
**(December)**

*Time : 2 hours*

*Full Marks : 40*

*The questions are of equal value.*

*Answer any **four** questions.*

**(GENETIC ENGINEERING AND RDT)**

1. Describe the basic principles of nucleic acid isolation and purification.
2. Write short notes on the following :
  - (a) Gene cloning
  - (b) DNA microarrays
3. Describe the principles and techniques involved in **in situ** hybridization.

4. Write short notes on the following :
  - (a) Chromosome walking
  - (b) Germplasm maintenance
5. Describe the role of molecular markers in genome analysis.
6. Write short notes on the following :
  - (a) Biosafety and bioethics
  - (b) Trade marks
7. Write a detailed essay on the Intellectual Property Rights.
8. Write short notes on the following :
  - (a) Western Hybridization
  - (b) Bio-plastic

