

**2014**  
**(December)**

*Time : 2 hours*

*Full Marks : 40*

*The questions are of equal value.*

*Answer any **four** questions.*

**(PLANT BIOTECHNOLOGY)**

1. Write a detailed note on artificial seed technology.
2. Write short notes on the following :
  - (a) Symmetric and asymmetric hybrids
  - (b) Production of haploid plants
3. Explain plant transformation technology, under following heads :
  - (a) Tumour formation

- (b) Ti Plasmids
  - (c) Ri Plasmids
  - (d) DNA transfer mechanism
4. Write short notes on the following :
- (a) Bt genes
  - (b) Antifungal Proteins
5. Explain chloroplast transformation with example of tobacco.
6. Write short notes on the following :
- (a) Plant secondary metabolites
  - (b) Green house technology
7. Give a detailed account of methods of direct DNA transfer.
8. Write short notes on the following :
- (a) Gene Silencing
  - (b) DNA banking for germplasm conservation

