



KERALA AGRICULTURAL UNIVERSITY
B.Sc (Hons) Forestry 2016 Admission
VI Semester Final Examination-June 2019

Fbti.3208

Forest Biotechnology (2+1)

Marks: 50

Time: 2 hours

(10x1=10)

- I Fill in the blanks:**
- 1 The potential ability of a plant cell to develop into a whole organism is called _____.
 - 2 _____ is the enzyme used for fusing the foreign DNA into a vector.
 - 3 The proliferation rate is maximum in _____ route of *in vitro* propagation.
 - 4 Type _____ restriction enzymes are commonly used in genetic engineering.
 - 5 The enzymatic method of protoplast isolation was discovered by _____.
 - 6 Western blotting is used for the transfer of _____.
 - 7 _____ is the most essential vitamin in plant tissue culture medium.
 - 8 RAPD is a PCR based technique (True /False)
 - 9 Name a selectable marker used in cloning vector .
 - 10 Transgene used for developing the first Bt cotton variety.
- II Write Short notes on any FIVE of the following (5x2=10)**
- 1 Significance of hardening of tissue culture plants.
 - 2 Differentiate between SSR and ISSR.
 - 3 Distinguish between somatic hybrid and cybrid.
 - 4 Technique for *in vitro* production of haploids and their application.
 - 5 Hormonal influence on rooting and shooting.
 - 6 Advantages of micro propagation.
 - 7 Advantages of DNA marker assisted selection.
- III Answer any FIVE of the following. (5x4=20)**
- 1 Steps in cDNA library preparation.
 - 2 Biosafety rules and regulations governing commercial release of GM crops in India.
 - 3 IPR
 - 4 Factors affecting *in vitro* propagation.
 - 5 Different routes of micro propagation.
 - 6 Different *in vitro* conservation techniques.
 - 7 Somaclonal variation.
- IV Answer any ONE of the following (1x10=10)**
- 1 Different applications of plant tissue culture.
 - 2 Different methods of direct and indirect gene transfer.
