



KERALA AGRICULTURAL UNIVERSITY

B.Sc. Forestry 2014 Admission

6th Semester Final Examination-July-2017

Cat. No: Tpbr.3210

Title: Plant Biotechnology (2+1)

Marks: 50

Time: 2 hours

I Match the following

(10x1=10)

A		B	
1	Hormonal control of organogenesis	A	Antioxidants
2	Plasmid	B	PCR enzyme
3	<i>Taq</i> polymerase	C	DNA ligase
4	Protoplast fusion	D	Interspecific crosses
5	Eco RI	E	Ti-plasmid
6	Embryo rescue	F	Luciferase
7	<i>Agrobacterium tumefaciens</i>	G	Carlson
8	Reporter gene	H	Skoog and Miller
9	Antibrowning agents	I	Restriction enzyme
10	Molecular suture	J	Cloning vector

II Write short notes/answers to any FIVE of the following

(5x2=10)

1. Ideal feature of cloning vectors.
2. Application of embryo culture in distant crosses.
3. Advantages of somatic embryogenesis.
4. Basic steps followed in plant tissue culture.
5. Nutritional requirements of *in vitro* cultures.
6. Pollen culture
7. Restriction enzymes

III Write short answers to any FIVE

(5x4=20)

1. Anther culture
2. Synthetic seed production
3. Meristem culture
4. *Agrobacterium tumefaciens* mediated gene transfer method
5. Gene amplification through PCR
6. Somaclonal variations
7. Protoplast culture

IV Write essay on any ONE

(1x10=10)

1. Importance and application of plant biotechnology in forestry and agriculture.
2. Principles, procedures and applications of Southern blotting technique.
