

KERALA AGRICULTURAL UNIVERSITY

B.Sc(Hons.) Forestry. 2012 Admission
VIth Semester Final Examination- July -2015

Cat. No: Tpbr.3210

Title: Plant biotechnology (2+1)

Marks: 80

Time: 3 hours

I. Fill up the blanks

10 x 1 = 10

1. The study of genetic information within the genome is called _____
2. The enzymes that are used to cut and join DNA is called _____
3. Anther culture is attributable to _____
4. Triploid production leads to _____ type of crop production.
5. Redenbaugh is known for _____
6. Southern hybridization is used to identify _____
7. _____ is a carbon source in tissue culture medium.
8. The most commonly used auxin for rhizogenesis is _____
9. Callus mediated cultures leads to _____
10. The ability of cells to grow into a complete plantlet is called _____

ii write short notes on ANY TEN

10 x 3 = 30

1. Nutritional requirement of tissue culture medium.
2. Stages of Micropropagation
3. Differentiate callogenesis and caulogenesis
4. Vectors for gene transfer.
5. RAPD
6. Somatic embryogenesis
7. Chemical sterilants
8. Somatic hybrid
9. Marker assisted selection
10. Western blotting technique
11. Transgenics in trees
12. Haploid culture

III write short essays on ANY SIX of the following

6 x 5 = 30

1. Design a Tissue culture lab
2. Trace the history of plant biotechnology
3. How will you produce synthetic seeds? Discuss.
4. What are Restriction enzymes? Discuss their action.
5. Write the role of embryo rescuing in tree improvement.
6. Discuss briefly about the tools of genetic engineering.
7. What is AFLP? Discuss its method and application.
8. What do you understand by biosafety? Discuss.

IV write essay on any one

1 x 10 = 10

1. Write the application of plant biotechnology in Agriculture, Forestry and medicine.
2. Discuss the Agrobacterium mediated gene transfer technology with suitable diagram.