

KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. 2013 Admission

IVth Semester Final Examination- July/August-2015

Time: 2 hours

Marks: 50

Cat. No: Biot.2201

Title: Principles of Plant biotechnology, Bio safety rules and Intellectual property rights (2+1)

I Fill up the blanks

(10 x 1=10)

1. _____ is the most commonly used carbon source in plant tissue culture medium
2. _____ is chemical used for encapsulating embryo to produce synthetic seeds
3. _____ is tissue culture technique to produce triploid plants
4. _____ is the enzyme necessary for synthesizing DNA from RNA
5. _____ is a molecular method for amplifying a known region in a DNA molecule
6. _____ is the commonly used bacteria for indirect gene transfer
7. _____ are restriction enzymes identifying the same palindrome
8. _____ are the genetic variations spontaneously originating in plants produced through tissue culture
9. _____ refers to the ability of a plant cell to divide and generate into a whole plant
10. _____ is the specific enzyme for DNA synthesis during PCR

II Write short notes on any FIVE

(5 x 2=10)

1. Mapping QTL
2. Somatic embryogenesis
3. Cybrids and their uses
4. Cosmids
5. Geographical indications
6. RAPD and its applications
7. TRIPS and its significance

III Write short notes on any FIVE

(5 x 4=20)

1. Describe the different stages of micropropagation
2. Biotechnology related IPR issues
3. Transgenic plants and their applications
4. Marker assisted selection and its application in crop improvement
5. Protoplast isolation, culture and fusion
6. DNA fingerprinting and its applications
7. Gene cloning-steps involved