



The Open University of Sri Lanka
Faculty of Engineering Technology
Industrial Studies (Agriculture) Programme
Final Examination- 2009
AEI 5241 Agricultural Biotechnology

Date : 05-04-2009
Time : 0930-1230 hours

SECTION II

1. a) Discuss the merits and demerits in Biotechnology.
b) Differentiate genome libraries and cDNA libraries.
c) Explain the method of preparing cDNA libraries.
d) State the importance of DNA libraries in identification and studying of the functions of the gene.
2. a) State the use of PCR in DNA finger printing.
b) Write short notes on,
 - i) Lambda phages
 - ii) Cosmids
- c) Explain the *Agrobacterium* mediated gene transfer.
3. a) Define the term bioreactors
b) List different types of bioreactors.
c) Discuss broadly current trends in enzyme biotechnology.
4. a) Give the generalized scheme of antibiotic production in stepwise procedure.
b) Explain the different vaccines produced through biotechnology.
c) Explain the purity and stability of biotech pharmaceuticals.
5. a) Mention the sequence of steps involved in tissue culture medium preparation.
b) Explain broadly essential components of growth medium required for plant *in-vitro* culture.
6. a) Explain the factors affecting the success of plant tissue culture.
b) Write short notes on any three (02) of the followings.
 - i) Haploid plant production
 - ii) Germplasm storage
 - iii) Advantages and disadvantages of microporpagation.