Code No: RR312304 **Set No. 1**

III B.Tech I Semester Regular Examinations, November 2006
PLANT BIO-TECHNOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Describe historical view in the developmental aspect of plant tissue culture. [16]
2. Explain the various factors affecting the production of secondary metabolites in plant tissues? [16]
3. Write about shikonin production at commercial level? [16]
4. Describe various methods of integration of T-DNA into the plant cells? [16]
5. How the plant viruses are classified and what is the importance of viruses in the foreign gene integration? [6+10]
6. Explain the symbiotic association mechanism in detail? [16]
7. Barbara Mc Clintock discovery of colour change in maize OF great significance in modern genetics - Justify. [16]
8. Give an account on the herbicide resistant plants. [16]

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Code No: RR312304 **Set No. 2**

III B.Tech I Semester Regular Examinations, November 2006
PLANT BIO-TECHNOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Write short notes on any two [8+8]
   (a) Haberlandt
   (b) Maheswari and Guha
   (c) Murashige and Skoog
2. List the secondary metabolites of plant origin performing as insecticides? [16]
3. Explain the process of extraction of different medicinal compounds from plant cells using bioreactors? [16]
4. What is the importance of T-DNA in Agrobacterium mediated gene transfer? [16]
5. What is Agrobiotechnology? What is its importance? Explain in detail.[3+3+10]
6. Explain different aspects of Nitrogen fixation? [16]
7. What is meant by RFLP? Explain its role in genetic engineering? [6+10]
8. Write short notes on any two [8+8]
   (a) Protinase inhibitors
   (b) Recombinant baculovirus
   (c) Insect control agents

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Code No: RR312304 **Set No. 3**

III B.Tech I Semester Regular Examinations, November 2006
PLANT BIO-TECHNOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Discuss the importance of Plant tissue culture in India? [16]
2. Write short notes on any two [8+8]
   (a) Alkaloids
   (b) Food additives
   (c) Insecticides?
3. What are methods of augmenting cell biomass in bioreactors? [16]
4. Describe various method of integration of T-DNA into the plant cells? [16]
5. Explain the importance of transgenic plants developed through viral vectors in the field of Agrobiotechnology? [16]
6. What is meant by Symbiosis? Explain it with a suitable example. [6+12]
7. Give an account on factors influencing disease resistance and susceptibility. [8+8]
8. Explain the process of gene transfer of herbicide tolerance. [16]

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Code No: RR312304 **Set No. 4**

III B.Tech I Semester Regular Examinations, November 2006
PLANT BIO-TECHNOLOGY
(Bio-Technology)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. What is subculturing? Explain its significance in plant tissue culture? [6+10]
2. Explain the development of hairy root cultures in an attempt to regulate the production of secondary metabolites? [16]
3. Explain the complete bioprocess involved in the production of secondary metabolites? [16]
4. Describe the vector mediated gene transfer with an example? [16]
5. Write about general characteristic features of plant viral vectors? [16]
6. What is meant by Symbiosis? Explain it with a suitable example. [6+12]
7. Give an account on factors influencing disease resistance and susceptibility. [8+8]
8. Write short notes on any two [8+8]
   (a) Protinase inhibitors
   (b) Recombinant baculovirus
   (c) Insect control agents

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