

Code No: 07A52305

R07

Set No. 2

III B.Tech I Semester Examinations, May 2011

PLANT BIOTECHNOLOGY

Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. What are different types of medically related proteins can be produced by plants. Explain in detail. [16]
2. Explain the following
 - (a) Engineering imidazolinone resistance plants by target modification of endogenous plant genes
 - (b) Mode of action of glufosinate [8+8]
3. Write short notes on
 - (a) MS medium
 - (b) Batch cultures
 - (c) Cell Suspension cultures. [5+5+6]
4. Discuss in detail about the advantages of haploids over diploids. [16]
5. Explain the process for shikonin production at using cell cultures. [16]
6. Explain the process of producing secondary metabolites in culture. [16]
7. Write short note on
 - (a) Liposome Mediated Transformation
 - (b) Transformation by Ultrasonication [8+8]
8. What are ferredoxin and flavodoxin and give an account on the role of them in nitrogen fixation. [16]

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Set No. 4

III B.Tech I Semester Examinations, May 2011

PLANT BIOTECHNOLOGY

Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Discuss the Bio-pharmaceuticals particles produced by molecular farming. [16]
2. What are Idiolites? Discuss about different types of Idiolites. [16]
3. How Ti plasmid transfers T-DNA in host cells? [16]
4. There is great success of transgenic plant production for biotic stress, however there is a lacuna which needs to be unplugged for abiotic stress, justify with suitable example. [16]
5. What are Cybrids & how can these be produced? Discuss the uses of Cybrids? [16]
6. Explain the various strategies for insect resistance by *Bacillus thuringiensis*. [16]
7. Discuss the development of hairy root culture to regulate the synthesis of secondary metabolites. [16]
8. Explain in detail about the chromosomal elimination and gemetoclonal variation. [16]

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Set No. 1

III B.Tech I Semester Examinations, May 2011

PLANT BIOTECHNOLOGY

Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Discuss the importance of plant tissue culture in India.
(b) Give an account on the essential requirements of plant tissue culture. [8+8]
2. Compare Haploid breeding with conventional method of breeding. Discuss their relative merits and demerits. [16]
3. Write short notes on
(a) Antimicrobial properties
(b) Explain cellular response to pathogen attack with a neat flow chart. [8+8]
4. Discuss the production of γ - linolenic acid and arachidonic acid in plants. [16]
5. What is meant by symbiosis? Explain it with suitable example, [16]
6. Explain how antisense RNA playing main role in fruit softening. [16]
7. Discuss some plant products of commercial interest that have been produced at Industrial level using bioreactors? [16]
8. Write short note on
(a) Selectable marker
(b) Gus genes [8+8]

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Set No. 3

III B.Tech I Semester Examinations, May 2011

PLANT BIOTECHNOLOGY

Bio-Technology

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain in detail the methods of explant sterilization. [16]
2. Explain the role of plant biotechnology in the production of industrial important enzyme. [16]
3. What is the importance of T-DNA in Agro bacterium mediated gene transfer? [16]
4. Explain the role of antisense RNA in enhancing secondary metabolite production. [16]
5. Describe the various strategies used for secondary metabolites synthesis. [16]
6. Write about Somoclonal variation in detail Discuss the merits and demerits of Somoclonal variation. [16]
7. Discuss the role of
 - (a) Phylotoxins
 - (b) Antimicrobial protein
 - (c) Aromatic biosynthesis pathway [5+5+6]
8. Explain
 - (a) How vacuolar NA/H antiport in transgenic plant improves salt tolerance
 - (b) Role of glycine betaine in osmotic stress [8+8]
