Code No: R05412310 **R05** **Set No. 2**

IV B.Tech I Semester Examinations,November 2010
METABOLIC ENGINEERING
Bio-Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain briefly how radiolabel materials are utilized in experimental determination of metabolic flux. [16]
2. What is Jacob Monod model? Explain its regulation with reference to Lac operon. [16]
3. Explain the advantages of writing an algorithm for a metabolic pathway synthesis, explain with an example. [16]
4. What is substrate range extension? Explain pathway manipulations to substrate range extension in the production of ethanol production. [16]
5. Write about the alteration of feed back regulation. [16]
6. Discuss in detail the conversion of insoluble substances by mixed or sequential bioconversions. [8+8]
7. Write about various producers of secondary metabolites. [16]
8. Explain the goals of biotechnological improvements in crops? Explain various strategies for metabolic engineering in plants. [16]

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Code No: R05412310 **R05** **Set No. 4**

IV B.Tech I Semester Examinations,November 2010
METABOLIC ENGINEERING
Bio-Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Write about various producers of secondary metabolites. [16]
2. Explain briefly how radiolabel materials are utilized in experimental determination of metabolic flux. [16]
3. What is Jacob Monod model? Explain its regulation with reference to Lac operon. [16]
4. Explain the advantages of writing an algorithm for a metabolic pathway synthesis, explain with an example. [16]
5. Explain the goals of biotechnological improvements in crops? Explain various strategies for metabolic engineering in plants. [16]
6. What is substrate range extension? Explain pathway manipulations to substrate range extension in the production of ethanol production. [16]
7. Discuss in detail the conversion of insoluble substances by mixed or sequential bioconversions. [8+8]
8. Write about the alteration of feed back regulation. [16]

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Code No: R05412310 **R05** **Set No. 1**

IV B.Tech I Semester Examinations,November 2010
METABOLIC ENGINEERING
Bio-Technology

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. What is substrate range extension? Explain pathway manipulations to substrate range extension in the production of ethanol production. [16]
2. What is Jacob Monod model? Explain its regulation with reference to Lac operon. [16]
3. Write about various producers of secondary metabolites. [16]
4. Discuss in detail the conversion of insoluble substances by mixed or sequential bioconversions. [8+8]
5. Write about the alteration of feed back regulation. [16]
6. Explain briefly how radiolabel materials are utilized in experimental determination of metabolic flux. [16]
7. Explain the goals of biotechnological improvements in crops? Explain various strategies for metabolic engineering in plants. [16]
8. Explain the advantages of writing an algorithm for a metabolic pathway synthesis, explain with an example. [16]

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Code No: R05412310 **R05** **Set No. 3**

IV B.Tech I Semester Examinations,November 2010
METABOLIC ENGINEERING
Bio-Technology

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain the goals of biotechnological improvements in crops? Explain various strategies for metabolic engineering in plants. [16]
2. Write about various producers of secondary metabolites. [16]
3. Write about the alteration of feed back regulation. [16]
4. Explain the advantages of writing an algorithm for a metabolic pathway synthesis, explain with an example. [16]
5. Discuss in detail the conversion of insoluble substances by mixed or sequential bioconversions. [8+8]
6. What is Jacob Monod model? Explain its regulation with reference to Lac operon. [16]
7. What is substrate range extension? Explain pathway manipulations to substrate range extension in the production of ethanol production. [16]
8. Explain briefly how radiolabel materials are utilized in experimental determination of metabolic flux. [16]

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