Code No: R05320804 **R05** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
BIO CHEMICAL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are modulators? Explain briefly.
   (b) Explain feedback inhibition system with an example.
   (c) Describe the fully competitive and non competitive inhibition. Give their effect on K_m and υ_{max} values. [4+4+8]
2. Describe the effects of substrate and product inhibition on biomass production? [16]
3. Write in detail about CSTR cell reactors with recycle and wall growth. [16]
4. Discuss in detail about DNA and write down the general chemical structure. [16]
5. Write an essay on continuous sterilization of air and media. [16]
6. Explain in detail the following recovery operations
   (a) Extraction
   (b) Adsorption. [8+8]
7. (a) Describe passive and facilitated diffusion with a neat figure.
   (b) Give an account of active transport with the help of a schematic diagram. Discuss briefly its applications. [8+8]
8. Give a detailed account on carbohydrates with suitable examples. [16]

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Code No: R05320804 **R05** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
BIO CHEMICAL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Write in detail about CSTR cell reactors with recycle and wall growth. [16]
2. (a) Describe passive and facilitated diffusion with a neat figure.
   (b) Give an account of active transport with the help of a schematic diagram. Discuss briefly its applications. [8+8]
3. Describe the effects of substrate and product inhibition on biomass production? [16]
4. Give a detailed account on carbohydrates with suitable examples. [16]
5. Write an essay on continuous sterilization of air and media. [16]
6. Explain in detail the following recovery operations
   (a) Extraction
   (b) Adsorption. [8+8]
7. (a) What are modulators? Explain briefly.
   (b) Explain feedback inhibition system with an example.
   (c) Describe the fully competitive and non competitive inhibition. Give their effect on K_m and υ_{max} values. [4+4+8]
8. Discuss in detail about DNA and write down the general chemical structure. [16]

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Code No: R05320804 **R05** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
BIO CHEMICAL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. Write in detail about CSTR cell reactors with recycle and wall growth. [16]
2. (a) Describe passive and facilitated diffusion with a neat figure.
   (b) Give an account of active transport with the help of a schematic diagram. Discuss briefly its applications. [8+8]
3. Write an essay on continuous sterilization of air and media. [16]
4. Describe the effects of substrate and product inhibition on biomass production? [16]
5. Explain in detail the following recovery operations
   (a) Extraction
   (b) Adsorption. [8+8]
6. Discuss in detail about DNA and write down the general chemical structure. [16]
7. Give a detailed account on carbohydrates with suitable examples. [16]
8. (a) What are modulators? Explain briefly.
   (b) Explain feedback inhibition system with an example.
   (c) Describe the fully competitive and non competitive inhibition. Give their effect on K_m and v_{max} values. [4+4+8]

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Code No: R05320804 **R05** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
BIO CHEMICAL ENGINEERING
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe passive and facilitated diffusion with a neat figure.
   (b) Give an account of active transport with the help of a schematic diagram. Discuss briefly its applications. [8+8]
2. (a) What are modulators? Explain briefly.
   (b) Explain feedback inhibition system with an example.
   (c) Describe the fully competitive and non competitive inhibition. Give their effect on K_m and υ_{max} values. [4+4+8]
3. Write an essay on continuous sterilization of air and media. [16]
4. Write in detail about CSTR cell reactors with recycle and wall growth. [16]
5. Give a detailed account on carbohydrates with suitable examples. [16]
6. Explain in detail the following recovery operations
   (a) Extraction
   (b) Adsorption. [8+8]
7. Describe the effects of substrate and product inhibition on biomass production? [16]
8. Discuss in detail about DNA and write down the general chemical structure. [16]

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