Code No: R05310502 **R05** **Set No. 2**

III B.Tech I Semester Examinations,November 2010
OBJECT ORIENTED ANALYSIS AND DESIGN
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Enumerate the steps to model simple collaborations. Give an example class diagram.
   (b) What are the contents in class diagram? [12+4]
2. (a) Change the design of the database package so a relational database is used instead of the current file solution. Draw the class diagram. Do not change the interface to the persistent class.
   (b) Improve the performance of the database by adding support for reusing deleted records in a file, and support for an index file where a more eofficient search for a specific object can be done. Draw activity diagram [8+8]
3. (a) Sketch the use case diagram for modeling a hospital information system aimed at collecting and storing complete information pertaining to the patients treatment history and disease behavior where actors could be doctor, lab technician, patient, duty nurse, receptionist, visitors etc.
   (b) What are the contents and common uses of activity diagrams?
   (c) Contrast: action state Vs. activity state. How are forking and joining used in activity diagram. Illustrate. [6+4+6]
4. (a) Enumerate the steps to model the following:
      i. Adaptable systems
      ii. Physical database
      iii. Source code
   (b) Enumerate the steps to reverse engineer a component diagram.
   (c) What are the common uses of component diagrams? [10+3+3]
5. (a) Define object identity. What is oid uniqueness principle?
   (b) What is model? What are the aims of modeling?
   (c) What are the principles of modeling?
   (d) What is UML? Define. [5+5+4+2]
6. (a) How is recursion represented in a sequence diagram?
   (b) Explain the following with regard to interaction diagrams.
      i. Object life line

ii. ≪create≫ and ≪destroy≫ messages
iii. Focus of control
iv. Dewey decimal numbering
v. Nesting of tours of control
vi. Semantic equivalence. [4+12]

7. (a) What is meant by importing and exporting with regard to packages? Explain.
(b) Enumerate the steps to model groups of elements.
(c) What are the visibility specifiers for classes and packages? Explain. [6+5+5]

8. (a) Enumerate the steps to model interprocess communication (IPC).
(b) Draw a UML diagram which models IPC in a distributed reservation system with processes spread across four nodes. Briefly explain.
(c) What are the characteristics of a well-structured active class and active object? [5+5+6]

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Code No: R05310502 **R05** **Set No. 4**

III B.Tech I Semester Examinations,November 2010
OBJECT ORIENTED ANALYSIS AND DESIGN
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Enumerate the steps to model the following:
   i. Adaptable systems
   ii. Physical database
   iii. Source code
   (b) Enumerate the steps to reverse engineer a component diagram.
   (c) What are the common uses of component diagrams? [10+3+3]
2. (a) Sketch the use case diagram for modeling a hospital information system aimed at collecting and storing complete information pertaining to the patients treatment history and disease behavior where actors could be doctor, lab technician, patient, duty nurse, receptionist, visitors etc.
   (b) What are the contents and common uses of activity diagrams?
   (c) Contrast: action state Vs. activity state. How are forking and joining used in activity diagram. Illustrate. [6+4+6]
3. (a) Enumerate the steps to model interprocess communication (IPC).
   (b) Draw a UML diagram which models IPC in a distributed reservation system with processes spread across four nodes. Briefly explain.
   (c) What are the characteristics of a well-structured active class and active object? [5+5+6]
4. (a) Change the design of the database package so a relational database is used instead of the current file solution. Draw the class diagram. Do not change the interface to the persistent class.
   (b) Improve the performance of the database by adding support for reusing deleted records in a file, and support for an index file where a more eofficient search for a specific object can be done. Draw activity diagram [8+8]
5. (a) Define object identity. What is oid uniqueness principle?
   (b) What is model? What are the aims of modeling?
   (c) What are the principles of modeling?
   (d) What is UML? Define. [5+5+4+2]
6. (a) Enumerate the steps to model simple collaborations. Give an example class diagram.

(b) What are the contents in class diagram? [12+4]

7. (a) What is meant by importing and exporting with regard to packages? Explain.
   (b) Enumerate the steps to model groups of elements.
   (c) What are the visibility specifiers for classes and packages? Explain. [6+5+5]

8. (a) How is recursion represented in a sequence diagram?
   (b) Explain the following with regard to interaction diagrams.
      i. Object life line
      ii. ≪create≫ and ≪destroy≫ messages
      iii. Focus of control
      iv. Dewey decimal numbering
      v. Nesting of tours of control
      vi. Semantic equivalence. [4+12]

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Code No: R05310502 **R05** **Set No. 1**

III B.Tech I Semester Examinations,November 2010
OBJECT ORIENTED ANALYSIS AND DESIGN
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
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1. (a) Enumerate the steps to model interprocess communication (IPC).
   (b) Draw a UML diagram which models IPC in a distributed reservation system with processes spread across four nodes. Briefly explain.
   (c) What are the characteristics of a well-structured active class and active object? [5+5+6]

2. (a) Enumerate the steps to model the following:
      i. Adaptable systems
      ii. Physical database
      iii. Source code
   (b) Enumerate the steps to reverse engineer a component diagram.
   (c) What are the common uses of component diagrams? [10+3+3]

3. (a) Sketch the use case diagram for modeling a hospital information system aimed at collecting and storing complete information pertaining to the patients treatment history and disease behavior where actors could be doctor, lab technician, patient, duty nurse, receptionist, visitors etc.
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   (c) Contrast: action state Vs. activity state. How are forking and joining used in activity diagram. Illustrate. [6+4+6]

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6. (a) How is recursion represented in a sequence diagram?
   (b) Explain the following with regard to interaction diagrams.

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ii. ≪create≫ and ≪destroy≫ messages
iii. Focus of control
iv. Dewey decimal numbering
v. Nesting of tours of control
vi. Semantic equivalence. [4+12]

7. (a) Define object identity. What is oid uniqueness principle?
(b) What is model? What are the aims of modeling?
(c) What are the principles of modeling?
(d) What is UML? Define. [5+5+4+2]

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Code No: R05310502 **R05** **Set No. 3**

III B.Tech I Semester Examinations,November 2010
OBJECT ORIENTED ANALYSIS AND DESIGN
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Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How is recursion represented in a sequence diagram?
   (b) Explain the following with regard to interaction diagrams.
      i. Object life line
      ii. ≪create≫ and ≪destroy≫ messages
      iii. Focus of control
      iv. Dewey decimal numbering
      v. Nesting of tours of control
      vi. Semantic equivalence. [4+12]
2. (a) Enumerate the steps to model simple collaborations. Give an example class diagram.
   (b) What are the contents in class diagram? [12+4]
3. (a) Sketch the use case diagram for modeling a hospital information system aimed at collecting and storing complete information pertaining to the patients treatment history and disease behavior where actors could be doctor, lab technician, patient, duty nurse, receptionist, visitors etc.
   (b) What are the contents and common uses of activity diagrams?
   (c) Contrast: action state Vs. activity state. How are forking and joining used in activity diagram. Illustrate. [6+4+6]
4. (a) Enumerate the steps to model the following:
      i. Adaptable systems
      ii. Physical database
      iii. Source code
   (b) Enumerate the steps to reverse engineer a component diagram.
   (c) What are the common uses of component diagrams? [10+3+3]
5. (a) Change the design of the database package so a relational database is used instead of the current file solution. Draw the class diagram. Do not change the interface to the persistent class.
   (b) Improve the performance of the database by adding support for reusing deleted records in a file, and support for an index file where a more eofficient search for a specific object can be done. Draw activity diagram [8+8]

6. (a) Define object identity. What is oid uniqueness principle?
   (b) What is model? What are the aims of modeling?
   (c) What are the principles of modeling?
   (d) What is UML? Define. [5+5+4+2]

7. (a) Enumerate the steps to model interprocess communication (IPC).
   (b) Draw a UML diagram which models IPC in a distributed reservation system with processes spread across four nodes. Briefly explain.
   (c) What are the characteristics of a well-structured active class and active object? [5+5+6]

8. (a) What is meant by importing and exporting with regard to packages? Explain.
   (b) Enumerate the steps to model groups of elements.
   (c) What are the visibility specifiers for classes and packages? Explain. [6+5+5]

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