Code: 9A05601

1

III B. Tech II Semester (R09) Regular Examinations, April/May 2012

OBJECT ORIENTED ANALYSIS & DESIGN

(Common to Computer Science & Engineering, Information Technology & Computer Science & Systems Engineering)

Time: 3 hours Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain about the common division mechanisms of UML in detail.
(b) Explain about behavioral things of UML in detail.

2 Define classifier. Explain in detail about different kinds of classifiers provided by UML.

3 Define class diagram. Explain about the graphical representation of class diagram with example.

4 Explain and draw the sequence diagram for ticket reservation use case in case of an online ticket reservation system.

5 What is a use case? Draw a use case diagram for a core banking application. Explain the same by identity various actors, use cases and relationships.

6 Write a short note on the common modeling techniques of time and space.

7 (a) Define a node. State the differences between nodes and components. Explain how nodes can be organized.
(b) Enumerate the steps to model the source code using components.

8 Your college library issues books to the staff and students. The student and staff do return the books after some time. Draw the class diagram required for the process also draw state chart diagram for any object and also draw component diagram and explain.

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1 Define an object flow. Explain briefly how objects are involved in the flow of control associate with an activity diagram.

2 Write a short note on the following:
a) Sending and receiving events.
b) Time and change events.
c) Call event.
d) Signal event.

3 (a) Enumerate the steps to model the client-server systems.
(b) What are the properties of components and component diagrams? Explain briefly.

4 Explain the two interaction diagrams for “Issue of a Book” and “Renewal of a Book” operations.

5 Define modeling. Why do we model? What we can achieve through modeling?

6 Explain about association names, roles, multiplicity and aggregation with examples.

7 Explain and draw the class diagram for an ATM bank system.

8 Explain about the following:
(a) Procedural sequencing.
(b) Steps involved in modeling the flow of control.

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3

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1		Explain about the following: (a) Process view. (b) Package. (c) Interface. (d) Transition phase.
2	(a)	Explain about the class diagrams with examples in detail.
	(b)	Explain about the component diagrams with examples in detail.
3		Explain about different types of relationships in class and object diagrams with examples.
4		Explain and draw the collaboration diagram for lend article use case for library management system.
5	(a)	What is the purpose of a synchronization bar? How are forking and joining used in activity diagram? Illustrate with a neat diagram.
	(b)	Draw activity diagram to inform a person when a loan is due and explain.
6	(a)	Differentiate between a process and a thread.
	(b)	What are the two standard stereotypes that apply to active class?
	(c)	Explain and model the behavior of an ATM machine with the help of a state chart diagram.
7		Enumerate the steps to model the following. Illustrate UML diagrams and explain briefly: a) Modeling processes and devices. b) Modeling distribution of components.
8	(a)	What are the packages in the library system? Explain.
	(b)	Draw a sequence diagram for the use case lend item and explain.

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Answer any FIVE questions
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1 (a) What are use case diagrams? Explain the properties and importance of use case diagrams.
(b) Draw an extended use case diagram for the soda machine example depicting the 'Extend', 'Include' and generalization relationships.

2 (a) Compare and contrast the real-time system with the distributed system.
(b) Enumerate the steps to model the following:
(i) Family of signals.
(ii) Exceptions.

3 (a) What are the properties of a well-structured component diagram?
(b) What are the contents, common properties and common uses of component diagrams? Explain briefly.

4 (a) Describe the various activities that are performed by various stake holders in a library information system.
(b) Draw and explain the collaboration diagram for the "Add Title" use case.

5 (a) Differentiate between process and deployment view of a system in detail.
(b) List out and explain the four phases of SDLC.

6 (a) Differentiate between class and object diagrams of UML.
(b) Differentiate between use case diagram and component diagram in detail.

7 Explain about the following:
(a) Forward engineer of a class diagram.
(b) Steps involved in modeling simple collaborations with examples.

8 (a) Explain about links and associations in detail.
(b) Explain about several kinds of actions model by UML.

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