

FIFTH SEMESTER B.E. (COMPUTER SCIENCE AND ENGINEERING)
DEGREE EXAMINATION, MARCH 2001

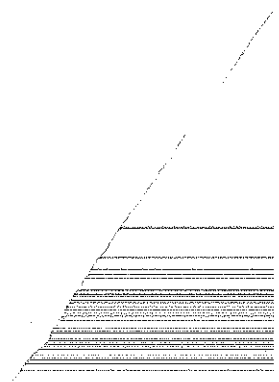
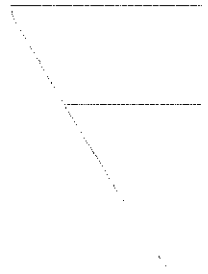
OBJECT ORIENTED SYSTEM DEVELOPMENT

Time : Three Hours

Maximum : 100 Marks

*Answer any five questions.
All questions carry equal marks.*

1. (a) What are the different characteristics of the object oriented system ? Explain in brief about any *two* characteristics. (10 marks)
- (b) What is prototyping and how it is useful ? Explain different type of prototypings. (10 marks)
2. (a) What are the different types of object oriented methodologies ? Explain in brief about Jacobson ET AL methodology. (10 marks)
- (b) Explain in brief about the unified approach. (10 marks)
3. (a) Name the different diagrams in UML. Explain sequence diagram and state chart diagram. (10 marks)
- (b) Give the number of steps involved in object oriented analysis processing with respect to unified approach and explain about use-case development. (10 marks)
4. (a) What are different methods available in identifying classes ? Explain in brief about each of them. (10 marks)
- (b) Describe relevant, fuzzy and irrelevant classes. (5 marks)
- (c) Write the guidelines for identifying attributes of a class. (5 marks)
5. (a) What are the different activities of object oriented design process ? (10 marks)
- (b) What are the different corollaries that can be derived using independence axiom and the information axioms ? Explain briefly. (10 marks)
6. (a) What is an OODBMS ? Describe the difference between on OODBMS and object Oriented program. (8 marks)
- (b) Describe the process of creating the access layer. (6 marks)
- (c) Explain in brief the macro and microprocesses of view layer design. (6 marks)
7. (a) What are different basic GRASP patterns ? Explain any *two* GRASP patterns in brief. (10 marks)
- (b) What are final four patterns in GRASP and explain in brief ? (10 marks)
8. (a) Give the different GOF patterns available in OOD and explain remote proxy and proxy GOF. (10 marks)
- (b) Give the different guiding principles of a successful process. Explain emphasising on architecture. (10 marks)



Fifth Semester B.E. Degree Examination, January/February 2003
Information Science and Engineering
Object Oriented Systems Development

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any FIVE full questions.

1. (a) Compare and contrast the procedure oriented software development and object oriented software development. What are the advantages of object orientation? (10 Marks)
- (b) Explain the following terms with example:
 - i) Aggregation
 - ii) Inheritance
 - iii) Consumer-producer association
 - iv) Static binding and dynamic binding. (10 Marks)
2. (a) What is the software development process? Discuss the waterfall approach of software development process. (8 Marks)
- (b) Why reusability is important? How does object oriented software development promote reusability? (6 Marks)
- (c) What is component based development? Why is it important in object oriented systems development? (6 Marks)
3. (a) Discuss briefly the different methodologies used for object-oriented system development. (12 Marks)
- (b) Explain macro and micro development processes. (4 Marks)
- (c) What is a pattern? Explain. (4 Marks)
4. (a) What is UML? Explain the behaviour diagrams in UML. (10 Marks)
- (b) Describe the UML class diagram. (5 Marks)
- (c) Why is documentation an important part of analysis? What are the guidelines for developing effective documentation? (5 Marks)
5. (a) What are use-cases? Explain. (5 Marks)
- (b) What is the purpose and need of analysis? Why is analysis a difficult task? Explain. (5 Marks)
- (c) Explain the noun phrase approach for identifying classes. (10 Marks)

6. (a) What are different activities of object oriented design process? Explain. (10 Marks)
- (b) Discuss the axioms and corollaries for object oriented design. (10 Marks)
7. (a) Explain object oriented database-management system. (5 Marks)
- (b) Describe the process of creating access layer classes. (5 Marks)
- (c) Describe the user interface-design rules. (10 Marks)
8. (a) Explain the design pattern-GRASP with example. (5 Marks)
- (b) What is GOF? Explain. (5 Marks)
- (c) Explain polymorphism and pure fabrication with respect to GRASP by clearly explaining UML notations for the same. (10 Marks)

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Fifth Semester B.E. Degree Examination, July / August 2003

Computer Science and Engineering

Object Oriented System Development

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any FIVE full questions.

1. (a) What is object - oriented development methodology ? Explain how the object oriented approach differs from traditional approach. (10 Marks)
- (b) Discuss the waterfall software development process. What are the merits and demerits of waterfall process ? (10 Marks)
2. (a) With a neat diagram explain the three macroprocesses of a software development life cycle with usecase driven approach. (12 Marks)
- (b) How is software verification different from validation ? (4 Marks)
- (c) What is the difference between patterns and frameworks? (4 Marks)
3. (a) Discuss the four phases of object modelling technique. Explain the OMT object model, dynamic model and OMT functional model with a neat diagram. (12 Marks)
- (b) Discuss the various processes and components of the unified approach. (8 Marks)
4. (a) Name the different UML diagrams. Explain briefly the activity diagram and interaction diagram. (10 Marks)
- (b) What are usecases ? Explain. (6 Marks)
- (c) Explain why analysis is a difficult task in software development process. (4 Marks)
5. (a) What are the different approaches in identifying classes ? Explain the common class pattern approach with suitable example. (10 Marks)
- (b) Explain association and a-part-of relationships with suitable examples. (10 Marks)
6. (a) What are the different corollaries that are derived using independence axiom and information axiom ? Explain briefly. (10 Marks)
- (b) Explain in brief UML object constraint language. (5 Marks)
- (c) Explain the process of creating access layer class from business class. (5 Marks)
7. (a) Describe the necessary characteristics that a system must satisfy to be considered an object oriented database. (10 Marks)
- (b) Explain briefly the macro level and micro level process of view layer design. (10 Marks)
8. (a) What are the different GRASP patterns? Explain any two GRASP patterns in brief. (10 Marks)
- (b) Explain singleton GOF and command GOF ? (10 Marks)

Q11

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2008 January / July / August 2008

Development

Q11 : (10 Marks)

Explain how the object-oriented programming model is used to design a system.

Explain the role of the design process in the development of a software system.

Explain the role of the design process in the development of a software system.

(10 Marks)

(10 Marks)

(10 Marks)

Explain the role of the design process in the development of a software system.

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Fifth Semester B.E. Degree Examination, July/August 2004

Information Science and Engineering

Object Oriented Systems Development

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any FIVE full questions.

1. (a) How does object oriented systems development methodology differ from traditional techniques? Explain the advantages of object orientation. (10 Marks)
- (b) Explain the following:
 - i) Methods and messages
 - ii) Dynamic inheritance
 - iii) Consumer - Producer association
 - iv) Aggregation
 - v) Object persistence (10 Marks)
2. (a) Describe the processes and concepts of Unified Approach. (10 Marks)
- (b) Briefly describe the layered approach to software development. (5 Marks)
- (c) Describe the UML. (5 Marks)
3. (a) With examples explain the UML sequence and collaboration diagrams. (10 Marks)
- (b) What is the objective of analysis? What tools can be used for extracting information about the system? What are the steps for analysis in the Unified Approach? (5 Marks)
- (c) Describe the Use-case model with an example. (5 Marks)
4. (a) Describe the common class pattern and use-case driven approaches for identifying the classes. (10 Marks)
- (b) Give the guidelines for effective documentation. (5 Marks)
- (c) What is super-sub class relationship? How can they be identified? (5 Marks)
5. (a) How can Associations, Attributes and methods be identified? Give the guidelines. (10 Marks)
- (b) What are the major steps in the design phase? Briefly explain the object oriented design axioms and corollaries. (10 Marks)

6. (a) What is OODMBS? Compare it with DBMS. (5 Marks)
- (b) Explain the steps for the design of the Access Layer. (5 Marks)
- (c) State the UI design rules. (5 Marks)
- (d) Give the guidelines for designing Dialog box, Error messages and Command buttons. (5 Marks)
7. (a) Explain the following patterns with respect to GRASP. (10 Marks)
- i) Expert ii) Creator iii) Controller
- (b) What are Gang of Four patterns? Explain any two of them. (10 Marks)
8. Write explanatory notes on: (4×5=20 Marks)
- (a) Prototyping
- (b) The UML Activity diagram
- (c) Guidelines for defining the attributes of classes.
- (d) Coupling and Cohesion.

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Fifth Semester B.E. Degree Examination, January/February 2005
Information Science and Engineering
Object Oriented Systems Development

Time: 3 hrs.]

[Max.Marks : 100

- Note:** 1. Answer any **FIVE** full questions.
 2. All question carry equal marks.

1. (a) What are orthogonal views of software? How does the object oriented approach differ from traditional approach ? List the advantages of object oriented development. (10 Marks)
- b) Explain the following terms with example
 - i) Association. ii) Aggregation.
 - iii) Static and dynamic binding. iv) Object persistence.
 - v) Meta classes. (10 Marks)
2. (a) What is software development process ? Explain the waterfall software development process. (5 Marks)
- b) What are the quality measures to be considered while building high quality software? (5 Marks)
- c) Explain the following.
 - i) Objectory
 - ii) Component based development . (10 Marks)
3. (a) Name and describe the different phases of OMT. (10 Marks)
- b) Name the different Booch diagrams. Describe briefly the different Booch system development processes. (10 Marks)
4. (a) Why is reusability important ?How does OOSD promote reusability? (5 Marks)
- b) Name the different UML diagrams. Explain briefly the activity diagram and interaction diagram. (10 Marks)
- c) Describe the differces between patterns and frameworks. (5 Marks)

5. (a) Why do we need object oriented analysis? Why it is difficult task? Explain. (5 Marks)
- b) Why is documentation an important part of analysis ? What are the guidelines for developing effective documentation? (5 Marks)
- c) What are the different approaches in identifying classes ? Explain the noun phrase approach for identifying classes. (10 Marks)
6. (a) What are the different types of identifying relationship among objects? Explain association and a-part -of relationships with suitable examples. (10 Marks)
- b) Discuss the axioms and corollaries for OOD. (10 Marks)
7. (a) What are the different activities of object oriented design process? Explain . (10 Marks)
- b) Explain the macro and micro processes of view layer design. (5 Marks)
- c) Write a note on UI design rules. (5 Marks)
8. (a) What are the different GRASP patterns ? Explain high cohesion and low coupling patterns. (10 Marks)
- b) Explain polymorphism and pure fabrication with respect to GRASP by clearly explaining UML notations for the same. (10 Marks)

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Fifth Semester B.E. Degree Examination, July/August 2005

Information Science and Engineering

Object Oriented Systems Development

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any FIVE full questions.

1. (a) What is system development methodology ? How does the object - oriented approach different from the traditional approach ? List the advantages of object-oriented development. (10 Marks)
- (b) Explain the following term with example.
 - i) Aggregation
 - ii) Consumer - producer association
 - ii) Static and dynamic binding
 - iv) Object persistence (10 Marks)
2. (a) What are the quality measures to be considered while building high quality software ? (6 Marks)
- (b) What is the software development process ? Describe the waterfall approach of software development process. List merits and demerits of waterfall approach. (8 Marks)
- (c) What is RAD and CBD ? Why CBD is important in OOSD ?. Explain. (6 Marks)
3. (a) Name the different Booch diagrams. Describe briefly the different Booch system development processes. (10 Marks)
- (b) What are OOSE and OOBE ? Explain the objectory. (5 Marks)
- (c) Describe the difference between patterns and frame works. (5 Marks)
4. (a) What are the different types of modeling ? Explain the UML behaviour diagrams. (12 Marks)
- (b) Describe the UML class diagram. Also explain association role, multiplicity and qualifier. (8 Marks)
5. (a) Why is documentation an important part of analysis ? What are the guidelines for developing effective documentation ? (5 Marks)
- (b) What is the purpose and need of analysis ? Why is analysis a difficult task? Explain . (5 Marks)
- (c) Explain the noun phrase approach for identifying classes. (10 Marks)
6. (a) List the different types of relationships among objects. What are the guidelines for identifying super-sub relationship in an application ? (5 Marks)

- (b) Explain the designing of methods for the VIANET bank objects. (5 Marks)
- (c) Describe the axioms and corollaries for object oriented design. (10 Marks)
7. (a) Explain OODBMS. (5 Marks)
- (b) Describe the macro and micro processes of view layer design. (10 Marks)
- (c) Stat the UI design rules. (5 Marks)
8. Write notes on :
- a) UML object constant language
- b) Process of creating access layer
- c) GOF patterns
- d) Pure fabrication in GRASP. (4×5=20 Marks)

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