N 1069

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2004.

Sixth Semester

Information Technology

IF 362 — COMPONENT BASED TECHNOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the middleware technologies that use IDL for defining the interfaces?

2. Differentiate between semantics of Remote Method Invocations and Local Method Invocations.

3. Can a process be both a server and a client? Give reasons.

4. What is the difference between a factory and a factory finder?

5. In CORBA, how do you cast an object reference to a more specific type?

6. In a distributed CORBA application, how do you pass a list as a parameter using IDL? Give an example.

7. Why is DOM dependent on Microsoft Technology?

8. What is the difference between two–phase locking and two–phase commit?

9. How does object activation work in COM?

10. Differentiate between an in–process server and an out–process server.

PART B — (5 × 16 = 80 marks)

11. (i) Describe DOM architectures and how events are managed in them. (8)

(ii) Write the steps involved in the transaction management in distributed object DBMS. (8)

12. (a) What is meant by distributed object? Explain any two ways to distribute objects using java.

Or

(b) State the guidelines to be considered when marshalling data between processes? Explain how are they achieved.

13. (a) Discuss the trade offs between the various policies/mechanisms that can be used for garbage collection in distributed objects.

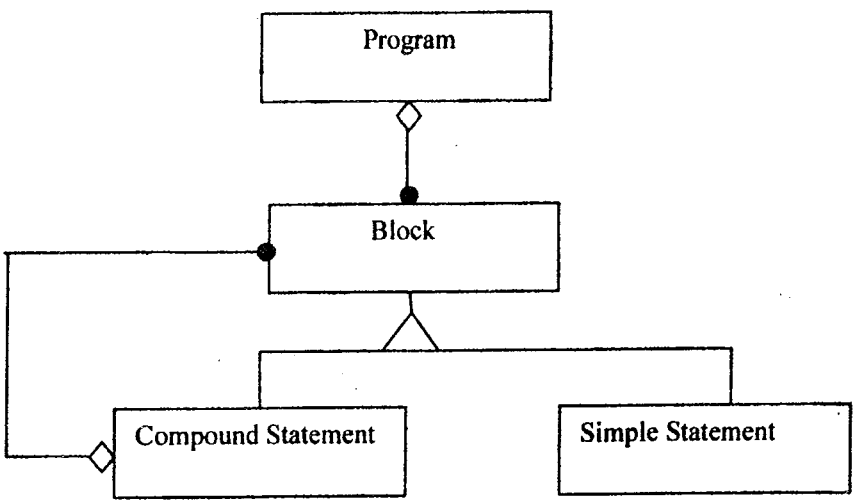
Or

(b) What are the main costs associated with client server system? Explain how these costs can be reduced in multi–tier architectures?

14. (a) Draw a model for locating objects with the details of how a server publishes objects and how clients look up objects.

Or

(b) Design an IDL interface that export the following object model without ignoring the factors that have a strong influence on the performance of a distributed system.



15. (a) Describe in detail the process of communication in DCOM components.

Or

(b) Describe the factors to be considered in COM for creating interfaces, their characteristics and basic types.

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