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Q 2334

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

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 is distributed system? Why Distributed Object Technology is so popular?
2. Define software component. How software component affects software supply chain management?
3. What is the role of registry and binding process in distributed object computing?
4. List various issues in garbage collection of distributed objects.
5. How to select an ORB product for an application?
6. What is Object adapter? Give its benefits in CORBA application.
7. What is distributed database systems? Give its issues.
8. Give the requirements for transactions in distributed object database management system.
9. What is factory object? How it simplifies the server side software development?
10. Compare COM and DCOM.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the various professions in component-based development. (8)
(ii) Compare synchronous and asynchronous communications in distributed object computing. (8)

Or

- (b) (i) In detail, compare and contrast Java beans and enterprise Java beans. (8)
(ii) Discuss the different types of marshalling process and how optimize it. (8)
12. (a) Discuss the following :
- (i) Object Clustering. (5)
(ii) Object caching. (5)
(iii) Object Query processing. (6)

Or

- (b) Explain the various issues of Object management in Distributed databases. (16)
13. (a) Discuss the features of IDL and explain the mapping of parameters and structured data types from IDL to Java. (16)

Or

- (b) Explain and compare static and dynamic communication between CORBA client and CORBA server. (16)
14. (a) Compare the distributed object technology with respect to the following :
- (i) Remote reference. (5)
(ii) Marshalling process. (5)
(iii) Interoperability. (6)

Or

- (b) Explain the following patterns :
- (i) Broker. (8)
(ii) Proxy. (4)
(iii) Factory. (4)

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15. (a) Discuss the following issues in COM/DCOM programming
- (i) Location Transparency. (4)
 - (ii) Life Cycle Management. (4)
 - (iii) Memory for COM Objects. (4)
 - (iv) Access methods for COM objects. (4)

Or

- (b) Discuss the following :
- (i) COM Object creation using ATL. (8)
 - (ii) DCOM communication Vs Message Queues. (8)