

Reg. No. :

**Z 3545**

M.C.A. DEGREE EXAMINATION, MAY/JUNE 2008.

Fourth Semester

MC 1754 — MIDDLEWARE TECHNOLOGIES

(Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Name any two groupware middleware.
2. Compare RPC and MOM.
3. Can the client directly access the bean? Justify.
4. What is the difference between java beans and enterprise java beans?
5. Compare entity bean and session bean.
6. Name the ways by which a client can find a bean.
7. What do you mean by dynamic invocation in CORBA?
8. How does CORBA and .NET provide support for language heterogeneity?
9. What is a moniker?
10. What is marshalling and unmarshalling?

PART B — (5 × 16 = 80 marks)

11. (a) (i) What are the different types of servers? How do they communicate with clients? What are the data entities each one of them can provide? What are their merits and demerits? (10)
- (ii) Compare 2 tier client-server architecture with 3-tier architecture. Also highlight when 3-tier architecture is better than 2-tier architecture. (6)

Or

- (b) (i) What is "middleware"? What is the mainfunction of middleware? What are service specific middleware? (6)
- (ii) Write notes on peer to peer communication. (10)
12. (a) Draw the EJB architecture and explain the functions of various entities involved. (16)

Or

- (b) (i) Discuss the roles in EJB. (6)
- (ii) How does EJB containers provide support for transactions and persistence? (10)
13. (a) (i) Draw the life cycle of entity bean and explain. (8)
- (ii) List the constraints on using session beans. (8)

Or

- (b) Discuss the steps involved in building and deploying EJB with bank transactions as example. (16)
14. (a) Draw the CORBA networking model diagram and explain how static and dynamic invocations are taking place. (16)

Or

- (b) (i) Enlist the services offered by CORBA and explain its usage. (8)
- (ii) How does CORBA provide support for network heterogeneity? (8)

15. (a) (i) Describe the object life cycle in COM. (8)  
(ii) Describe the different types of servers and how client/server communication is taking place in each of them. (8)

Or

- (b) (i) Highlight the differences in COM and CORBA. (8)  
(ii) Explain the .NET architecture. (8)
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