

Note:

1. Question 1 is compulsory.
2. Answer any 4 out of the remaining questions.
3. Answers to subsections must be answered together.

- Q1. (a) Explain the term n-tier architecture with an example. (05)
(b) Describe in brief what you understand by SOA. (05)
(c) Give an overview of different types of middleware models (05)
(d) Give a brief overview of .net architecture. (05)

- Q 2. (a) Describe the steps involved in deploying an EJB application. (10)
(b) Describe the CORBA architecture with the help of a block diagram (10)

Q.3 Consider an online student admission system, which maintains entries for students and courses they enroll for. For each student name, age, marks and address etc. are stored. For each course, store the course name, subject area, List of books, faculty name, number of students etc. Further for each course also store the schedule, and marks of students for the current offering.

- (a) Give the DTD for the XML schema for the described system. (10)
(b) Write the following query in XQuery:
"Find all students who have scored an "A" grade in more than two courses in a Semester". (10)

- Q.4.(a) What are the different types of "beans" one can define in an EJB application. Illustrate using an online banking system as an example application. (10)
(b) Describe the structure of a WSDL file using an example (10)

- Q.5 (a) What do you mean by a web service? Describe the different Web Services standards available. (10)
(b) What is the role of IDL? Using CORBA IDL define interfaces to objects in an online library management system. (10)

- Q.6 (a) What do you mean by a Enterprise Service Bus (ESB)? How is it used to implement a SOA based application. (10)
(b) What are CORBA services? Describe any two CORBA services. (10)

Q.7. Write a brief note on the following :

- (a) COM and DCOM (10)
(b) JAVA RMI (10)
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