

FACULTY OF INFORMATICS

B.E. 4/4 (IT) I – Semester (Suppl.) Examination, June / July 2015

Subject : Distributed Systems (Elective – II)

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.**PART – A (25 Marks)**

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| 1 | Define distributed systems. Why is middleware very important? | 3 |
| 2 | Describe precisely what is meant by a scalable system. | 2 |
| 3 | What are the main applications of message-passing interface? | 2 |
| 4 | How are synchronous and asynchronous transmissions different for data streams? | 3 |
| 5 | Distinguish between stateful and stateless servers. | 2 |
| 6 | What is a “mount point”? How is mounting achieved in a name space? | 3 |
| 7 | What is the importance of interoperable object reference in CORBA systems. | 2 |
| 8 | How is security addressed in Globe system? | 3 |
| 9 | What is the importance of low-latency communication in distributed multimedia systems? | 2 |
| 10 | What is “Fair scheduling” in distributed multimedia systems? | 3 |

PART – B (50 Marks)

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| 11 | a) Explain what is meant by transparency. Give examples of different types of transparency. | 5 |
| | b) What is vertical distribution and horizontal distribution in design of multitiered client-server architectures? | 5 |
| 12 | a) Distinguish between persistent and transient communication. | 5 |
| | b) What is the role of message broker in message queuing systems? | 5 |
| 13 | a) Explain how client-to-server binding can be done using a daemon and using a superserver. | 5 |
| | b) Explain about iterative name resolution mechanism. | 5 |
| 14 | Distinguish between CORBA, DCOM and GLOBE based on naming, synchronization and replication features. | 10 |
| 15 | a) What are the typical characteristics of multimedia data? | 4 |
| | b) Explain how bandwidth reservation and statistical multiplexing are useful in admission control. | 6 |
| 16 | a) Explain about agent technology and use of agents in distributed systems. | 5 |
| | b) Explain the use of have based approaches in supporting mobile entities. | 5 |
| 17 | Write short notes on : | |
| | a) Client-to-server binding in DCE | 5 |
| | b) Real time scheduling for resource management in distributed multimedia systems. | 5 |
