Time – 3 hrs. **Marks 80**

N.B. 1. Question no.1 is compulsory.
2. Attempt any 3 questions out of remaining 5 questions.
3. Figures to the right indicate full marks.
4. Assume suitable data wherever necessary.

Q.1	a	Compare NOS and DOS	5 M
	b	What are various kind of message buffering techniques used in IPC.	5 M
	c	What are Roles in EJB?	5 M
	d	Explain Service Oriented Architecture (SOA) lifecycle with a diagram.	5 M
Q.2	a	Describe the need for coordinator in distributed system. Demonstrate the working of Election algorithm.	10 M
	b	What are the components of CORBA? List the advantages of CORBA.	10 M
Q.3	a	Describe desirable features of a good message passing system.	10 M
	b	Explain client centric consistency model in distributed system.	10 M
Q.4	a	Explain migration in Heterogeneous system.	10 M
	b	Describe different distributed computing models.	10 M
Q.5	a	Describe various transparencies in distributed system.	10 M
	b	Explain need of deadlock detection algorithm. Explain probe based distributed deadlock detection algorithm.	10 M
Q.6	Write short note on (Any two)		20 M
	a	Group communication	
	b	. NET architecture	
	c	RPC communication protocol	

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