11819 3 Hours / 100 Marks

Seat No.

Instructions:

- (1) All Questions are *compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE:

 $5 \times 4 = 20$

- (a) Define distributed operating system with it's features.
- (b) Explain static v/s Dynamic Remote Invocations.
- (c) Explain the process & thread in distributed operating system.
- (d) Describe any two naming entities with advantages.
- (e) Explain Impact of cloud computing on user.
- (f) Explain key challenges of RPI.
- (g) Explain software agents in Distributed system.

2. Attempt any FOUR:

16

- (a) Describe network operating system with suitable example.
- (b) Differentiate between cloud & grid computing.
- (c) Describe user level & Kernel level threads in Distributed operating system.
- (d) Explain naming V/s locating entities.
- (e) Describe low level & higher level protocol.
- (f) Explain RPC with parameter passing.

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3.	Attempt any FOUR:		16
	(a)	Differentiate between Homogeneous & Heterogeneous multicomputer system.	
	(b)	Explain Remote object invocation with example.	
	(c)	Describe Hierarchical approaches over home based approaches for locating	
		mobile entities.	
	(d)	Explain general design issues of object server.	
	(e)	Explain the role of operating system in grid computing.	
	(f)	Explain approaches to code migration.	
4.	Attempt any FOUR:		16
	(a)	Explain client & server architecture with advantages.	
	(b)	Explain different form of communication in message oriented system.	
	(c)	Explain code migration in Heterogeneous system.	
	(d)	Write down simple solution for locating mobile entities.	
	(e)	Explain the concept of domain name system in detail.	
	(f)	Discuss governance in the cloud computing.	
5.	Attempt any FOUR:		16
	(a)	Explain any four issues in design of distributed operating system.	
	(b)	Differentiate between message and stream oriented communication.	
	(c)	Explain Advantages & Disadvantages of code migration.	
	(d)	What is reference listing and identifying unreachable entities?	
	(e)	Explain IAaS SPI framework for cloud computing.	
	(f)	Explain parameter passing in remote object invocation.	
6.	Attempt any FOUR:		16
	(a)	Explain how DOS different from OS with advantages.	
	(b)	Describe quality of services in stream oriented communication.	
	(c)	Write three methods to handle code migration.	
	(d)	What is recursive name resolution.	
	(e)	Explain private & Hybrid cloud Deployment model.	
	(f)	Explain Advantages of agent technology.	