Enrolment No

	GUJARAT TECHNOLOGICAL UNIVERSITY					
		BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2017				
Sul	oject	Code: 2160710 Date: 08/05/2	2017			
Sub	oject	Name: Distributed operating system				
Time: 10:30 AM to 01:00 PMTotal Marks: 70						
Inst	ructior	ns: Attempt all questions.				
	2.	Make suitable assumptions wherever necessary.				
	3.	Figures to the right indicate full marks.				
			MARKS			
Q.1	Ansv	ver the following short questions.	14			
	[1]	Define: Distributed Operating system.				
	[2]	(a) File Foundations (c) Multi system image				
		(b) Single system image (d) Networking image				
	[3]	All threads are having equal priority in model.				
	L - J	(a) Dispatcher-worker model				
		(b) Pool model				
	[4]	In paradigm, the communicating processes executes in non-				
	L - J	overlapping lifetimes.				
		(a) Message passing				
		(b) Distributed shared memory (c) None				
	r <i>e</i> 1	What is Cromularity?				
	[5] [6]	Which of the following is a network layer protocol?				
	[0]	(a) TCP (b) HTTP (C) X.25 (D) X.5000				
	[7]	XDR stands for				
	r. 1	(a) External digital representation				
		(b) External data Representation				
	101	(c) External data Repetition				
	[8] [9]	What is the job of Server stub in RPC? Define : Cryptography				
	[7] [10]	What is mutual exclusion?				
	[11]	CSMA stands for				
		(a) Carrier sense multiple access				
		(b) Carrier slot multiple access (c) Cell slot multiple access				
	[12]	False sharing leads to thrashing- state true or false.				
	[13]	What is Name server in naming system?				
	[14]	Context switching is faster inlevel approach.				
		(a) User (b) kernel (c) idle				
Q.2	(a)	What is transparency in distributed operating system? Explain any two in	03			
	(b)	Differentiate tightly coupled and loosely coupled multiprocessor system.	04			
	(c)	What are the major issues in designing a distributed operating system?	07			
			~=			
	(C)	Explain Remote procedure call (RPC) model.	07			

(c) Explain Remote procedure call (RPC) model.

1

Q.3	(a) (b) (c)	Explain workstation model for building distributed computing system. What is buffering? Explain different types of buffering in brief. Explain bully algorithm with example.	03 04 07
		OR	
Q.3	(a)	Explain Totalfreezing and Pretransferring address space transfer mechanism.	03
	(b) (c)	Explain desirable features of a good process migration mechanism. What is 'Deadlock'? What are the four conditions for deadlock to occur? Give suitable example to provide that if any one of the four conditions is absent no deadlock is possible.	04 07
Q.4	(a) (b)	What is Thread? Explain different models for organizing the thread in brief. Explain Write-through and Delayed-Write schemes of file caching in distributed system.	03 04
	(c)	List out implementation issues in distributed shared memory system. Explain any two in detail.	07
Q.4	(a) (b) (c)	Explain asynchronous point to point message passing with example. Explain Thrashing and False sharing in Distributed shared memory. What is consistency model in shared memory system? Explain strict, sequential and causal consistency model in detail.	03 04 07
Q.5	(a)	Which are the characteristics features of system oriented name in naming system?	03
	(b)	What is naming system? Explain desirable features of good naming system in brief.	04
	(c)	Explain the architecture of distributed web-based system. OR	07
Q.5	(a)	Explain (1) Worms (b) Logic bomb	03
	(b)	Explain JAVA RMI Components.	04
	(c)	Explain potential attacks to computer systems.	07
