GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI- EXAMINATION - SUMMER 2016

Subject Code:163101 Date:13/0 Subject Name:Operating System Design Time: 10:30 AM to 01:00 PM Total Ma			3/05/2016 Marks: 70	
	1.	Attempt all questions.		
	2. 3.	Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	Explain context of a process with its components. Explain block diagram of UNIX system kernel.	07 07	
	(b)	Explain block diagram of ONIX system kerner.	U/	
Q.2	(a) (b)	What is Inode? Explain direct and indirect blocks in Inode. Explain various data structures related to process subsystem and fil subsystem.	07 e 07	
		OR		
	(b)	What is Signals? Explain handling of Signals by kernel.	07	
Q.3	(a)	Explain algorithm for Buffer Allocation (getblk ()).	07	
	(b)	Explain algorithm for conversion of a Path Name to an Inode (namei ()). OR	07	
Q.3	(a)	Explain algorithm for Block Read Ahead (breada ()).	07	
	(b)	Explain algorithm for Freeing Inode (ifree ()).	07	
Q.4	(a)	Explain Pipe system call in detail.	07	
	(b)	Explain algorithm for reading a file (read ()). OR	07	
Q.4	(a)	Explain DUP system call in detail.	07	
	(b)	Explain algorithm for creating a file (creat ()).	07	
Q.5	(a)	Explain Fork system call in detail.	07	
	(b)	Explain Sleep algorithm.	07	
		OR		
Q.5	(a) (b)	Explain Process State Transition Diagram in detail. Explain algorithm for Allocating a Region (allocreg ()).	07 07	
