Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 715302		ode: 715302 Date: 09-01-2013	3
Subj	ect N	ame: OS Programming	
Time	e: 02 .	30 pm – 05.00 pm Total Marks: 70)
Inst	ructi	ons:	
	1. A	Attempt all questions.	
	2. I	Make suitable assumptions wherever necessary.	
	3. I	Figures to the right indicate full marks.	
Q.1	(a)	What is deadlock? Explain deadlock prevention in detail.	07
	(b)	Write short note on: Types of ioctl function calls.	07
Q.2	(a)	What is deadlock avoidance? Explain Banker's algorithm.	07
	(b)	Write short note on: Memory Management in Linux. OR	07
	(b)	Explain System administration commands of Linux.	07
Q.3	(a)	Explain the architecture of Linux.	07
	(b)		07
		OR	
Q.3	(a)	1 11 0 0	07
	(b)	Explain various page replacement strategies.	07
Q.4	(a)	Write a shell script to implement getopts statement having command line arguments $-c - d - e$.	07
		Where, options are –c clear the screen,	
		-d show list of files in current working directory,	
		-e start editor	
	(b)		04
	(c)	What are the advantages and disadvantages of thread? OR	03
Q.4		Write a program to get/set environment variable in Linux.	07
Q.4	(b)	Write a program under Linux platform which takes a set of integer numbers from the command-line and prints their average value.	07
Q.5	(a)	What is a zombie process?	02
Q.S	(b)	*	02
	(c)	Write the name of Linux Configuration tool.	02
	(d)	Write a shell script to check whether command line arguments supplied file name exists or not?	04
		OR	
	(d)	Write a program to extract host information like operating system name, host name, version number etc.	04
	(e)	What is the difference between Monolithic and Micro kernel? OR	04
	(e)	List and explain important device files in Linux. 04	
