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### Code No: 824AB JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD MCA IV Semester Examinations, April/May - 2019 LINUX PROGRAMMING

## Time: 3hrs

## Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

## PART - A

	5 × 5 Mai	ks = 25
1.a)	Explain in detail about Process Utilities.	[5]
b)	Differentiate soft link and hard link with examples.	[5]
c)	Compare and Contrast Reliable and Unreliable Signals.	[5]
d)	Write a short note on "rclose()" library function	[5]
e)	What are Berkeley socket sand write a note on 'socket options'?	[5]
	PART - B	
	5 × 10 Mar	ks = 50
2. a)	Write a shell script to print the details of the user login information.	
b)	Explain various patterns and actions in awk.	[5+5]
	OR C	
3. a)	Write an awk script to perform simple arithmetic operations.	
b)	Give any 3 examples for control structures in shell programming.	[5+5]
4. a)	Explain the support given by kernel for files in detail.	
b)	What do you mean by a hole in a file? How does the use of lseek() result in	n hole in a
	file? Explain with an example program.	[5+5]
	OR	
5.	Describe Unix file system advantages and also state different command	ls used in
	System calls for I/O operations.	[10]
	1 m	
6.	Write a detailed note on following processes:	
	a) Zombie processes b) Orphan processes.	[5+5]
	OR	
7.	Explain the below system calls with the help of syntax and examples:	
	a) kill b) raise c) alarm d) pause e) abort	[10]
8.a)	Describe the API provided by linux for semaphores.	
b)	Write a program for locking a file using semaphore.	[5+5]
	OR	
9.	Explain the following concepts about pipes:	
	a) Pipes between two process b) Pipes among three process in a shell.	[5+5]
10.	Explain the usage of Stream Sockets using Client-Server Message handling	g example.
		[10]
	OR	

- 11.a) Explain how to attach and detach a shared-memory segment.
  - b) Explain how to handle multiple simultaneous clients.

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Max.Marks:75