M Tech S3

APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY
08 PALAKKAD CLUSTER

Q. P. Code : CS-3AA-18-1 (Pages: 2)

Name: .....

Reg. No:.....

THIRD SEMESTER M.TECH. DEGREE EXAMINATION DEC 2018

Branch: Computer Science and Engineering Specialization: Computer Science and Engineering

08 CS 7011(A) UNIX INTERNALS

Time:3 hours **Max.marks: 60**

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q.no.	Module 1	Marks
1.a	Explain the structure of a Buffer pool.	3
	Answer b or c	
b	Explain the architecture of unix operating system with neat diagram	6
c	Write down the algorithm for Release block and Get Block.	6

Q.no.	Module 2	Marks
2.a	Illustrate the algorithm for conversion of a path name to an Inode.	3
	Answer b or c	
b	Explain the algorithm for I-node assignment to a new file with example.	6
c	Illustrates direct and indirect blocks in I-node with suitable examples.	6

Q.no.	Module 3	Marks
3.a	Mention the syntax and function of the WRITE system call.	3
	Answer b or c	
b	Explain the mounting and unmounting of a file system	6
C	Elaborate the system call which is used for interprocess communication.	6

Q.no.	Module 4	Marks
4.a	Explain process state and transitions with diagram.	3

Answer b or c

b	Describe interrupts and exceptions in saving the context of a process along with an algorithm for handling Interrupts.	6
c	Explain about layout of system memory.	6

Q.no.	Module 5	Marks
5.a	Write an algorithm for the swapper.	4

Answer b or c

b	Explain in detail about swapping memory management policy in Unix system.	8
c	Discuss about demand paging and its data structures.	8

Q.no.	Module 6	Marks
6.a	Discuss about driver interfaces.	4

Answer b or c

b	Explain about disk drivers and terminal drivers.	8
c	Explain the linux system with a neat architecture.	8