

Code No: MC1633 /R16

MCA III Semester Regular/ Supplementary Examinations, November-2019

UNIX PROGRAMMING

Time: 3 Hours

Max. Marks: 60

*Answer Any FIVE Questions
All Questions Carry Equal Marks*

1. a Define process. How do we create process in Unix? 6 M
b Explain the following process utilities by giving suitable example? 6 M
i. ps ii. Kill iii. nice
2. a Explain about the control structures used in shell script? 6 M
b Write a shell script to find sum of the given n natural numbers? 6 M
3. a Explain Unix file system with the help of a neat diagram? 6 M
b Let the file current permissions are **rwX r - - r - x** specify the chmod expressions required to change the following using absolute and relative methods:
i) **rwX rwX r - -** ii) **r - - r - - r w -** iii) **r - - - w - r - -** 6 M
4. a Write a brief note on low level file access functions? 6 M
b List out the differences between fork() and exec() system calls? 6 M
5. a What is signal handling ? Write the commands for the following operations: 6 M
i. To list down the signals ii. How to send a signal iii. How to trap a signal
b What is System Call? List and explain any four process management system calls? 6 M
6. a What is Inter Process Communication? List and explain briefly about IPC mechanisms? 6 M
b Write a program to share message between parent and child process using pipe? 6 M
7. a What is a Semaphore? Write the syntax of semget(), semop() and semctl() system calls? 6 M
b What is Shared Memory? Write the syntax of shmget(), shmat(), shmdt() and shmctl() system calls? 6 M
8. a Write a program to implement client/server communication using sockets? 8 M
b Write the Sequence of System Calls involve in Socket Connection Oriented Protocol? 4 M
