MCA/M08
Linux &Shell Programming
MCA -402

Time : 3 Hours   MM:50
Note:- Attempt Five questions in all, selecting One question from each unit.

1   What do you understand by Linux/Unix file system? Discuss categorization of files that can be created in Linux/Unix . Also explain the structure and components of file system along with various types of file systems. How file system can be mounted in Linux?   10

2(a)   Explain the booing process in Linux/Unix.   5
 (b)   Explain the following command in Linux:
            (i)   wc   (ii)   cmp
            (iii)   touch   (iv)   nl
            (v)   tail.

3(a)   Wxpalin the various operators provided by shell for string comparison, numeric comparison, file checking and logical operators.   5
 (b)   Write shell program to generate first n prime numbers.   5

UNIT-II

4(a)   What do you understand by a process in Linux/Unix? How is it created? Explain the birth and death of process in Linux.   6
 (b)   How the processes can be controlled using at, batch, cron and time?   4

5(a)   Explain the purpose of grep filter along with its syntax and various options. How grep is different from egrep and fgrep?   5
 (b)   Discuss the purpose of Built-in-variables in awk with the help of examples. 3
 (c)   Explain I/O systems in awk.   2

6(a)   How administrator in Linux/Unix can maintain security?   5
 (b)   Explain the purpose of following built-in functions in pert with the help of examples:
        (i)   chop( )   (ii)   index ( )
        (iii)   shift ( )   (iv)   splic ( )
        (v)   substr ( )

UNIT-III

7(a)   Explain various types of signals in Linux/Unix. How can they be handled? 5
 (b)   Differentiate between system I/O and stream I/O Linux/Unix.   5

8(a)   Write short note on vi-editor by discussing its important features.   5

(b)   How optimization can be performed using compiler options in Linux? Discuss its advantages and disadvantages with the help of an example.   5

9(a)   Differentiate between static and dynamic memory management in Linux with the help of examples.   5

(b)   Write short note on dynamic loader and gdb in Linux.   5

10 what do you understand by makefile in Linux? How dependency calculations are performed in a makefile? Discuss its advantages with the help of an example.   10