

Roll No.

Total Pages : 2

MCA/DX

5561

LINUX AND SHELL PROGRAMMING

Paper : MCA-502

Time : Three Hours]

[Maximum Marks : 80

Note : Q. No. 1 is compulsory. In addition to that attempt *four* more questions, selecting *one* question from each unit.

1. (a) Differentiate between Linux and Unix.
(b) Explain various regular expressions in brief.
(c) Explain structure of file system in brief.
(d) Explain booting process in Linux.
(e) Discuss *three* working modes of vi editor.
(f) How new user can be added and current user can be removed in Linux by system administrator ?
(g) Explain various optimization levels with C under Linux.
(h) What is dynamic loader ? 8×3=24

UNIT-I

2. (a) Explain following commands in Linux :

(i) ls	(ii) cat
(iii) wc	(iv) pwd
(v) man	(vi) who
(vii) bc	(viii) du.

8
(b) Describe grep and sed filters in Linux with examples and all the possible options. 6

3. (a) Name various Linux distributions alongwith architecture of Linux operating system. 7
- (b) Explain following regular expressions in detail :
(i) + (ii) ? (iii) IRE (iv) TRE (v) * (vi) [] (vii) ^ 7

UNIT-II

4. What is file system in Linux ? Discuss the standard file system. Explain various file system types in Linux. How files can be mounted and unmounted in Linux ? 14
5. (a) How jobs can be controlled in Linux ? 7
- (b) What do you understand by signals in Linux ? How signals can be handled in Linux ? 7

UNIT-III

6. (a) Discuss various shell operators in Linux. 7
- (b) Explain loops in shell in Linux. 7
7. (a) Write a shell script to copy multiple files without overwriting. 10
- (b) How super user status can be acquired ? Also discuss various priviledges given to administrator. 4

UNIT-IV

8. What do you understand by makefile ? How projects can be handled using makefile ? Design a makefile with the help of dependency calculations. Explain with the help of examples. 14
9. (a) How debugging can be done with gdb ? Explain. 7
- (b) How static and dynamic libraries can be built and used ? 7