USN	1	M	S	0						

M S RAMAIAH INSTITUTE OF TECHNOLOGY
(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)
BANGALORE – 560 054
SEMESTER END EXAMINATIONS – JANUARY 2010

Course & Branch:	**Master of Computer Applications**	**Semester: I**
Subject:	**Introduction to Unix**	**Max. Marks: 100**
Subject Code:	**MCA14**	**Duration: 3 Hrs**

Instructions to the Candidates:
- **Answer one full question from each unit.**

UNIT – I

1. a) Explain the characteristic features of UNIX operating system. (8)
   b) What is the command structure in UNIX? Explain how it is processed by the shell with example. (6)
   c) Explain the following commands: (6)
      i) **script** ii) **who** iii) **stty**

2. a) Explain the relationship between Kernel and Shell in Unix with a neat diagram. (8)
   b) Differentiate between internal and external commands with example. (4)
   c) Explain the following commands: (8)
      i) **man** ii) **lock** iii) **ispell** iv) **date**

UNIT – II

3. a) Explain the UNIX file system with a neat diagram. (5)
   b) Explain Absolute and Relative path names with example. (5)
   c) Explain the following w.r.t. to UNIX files through an example. (10)
      i) **user** ii) **inode** iii) **umask** iv) **file permissions** v) **find**

4. a) Explain various types of files in UNIX. (6)
   b) Differentiate between hard and symbolic links. (4)
   c) Explain the following commands: (10)
      i) **chmod** ii) **split** iii) **ls –1** iv) **file** v) **od**

UNIT – III

5. a) Explain the following w.r.t. Shell in UNIX. (10)
      i) **command substitution** ii) **wild cards**
      iii) **escaping** iv) **shell variables pipe**
      v) **pipe**
   b) Write a note on I/O Redirection. (5)
   c) Explain the files: **/dev/null** and **/dev/tty** with example. (5)

6. What is a filter? What is its advantage? Explain the following commands with syntax and an example each. (20)
   i) head ii) tail iii) cut
   iv) paste v) uniq vi) tr
   vii) tee viii) pr ix) sort (on primary and secondary keys)

UNIT – IV

7. a) What is **vi**? Explain different modes in which **vi** is invoked with suitable examples. (10)
   b) Write a shell script to accept an integer and find the reverse and sum of all the digits in it. (5)
   c) Explain how shell scripts are debugged with an example. (5)

8. a) Explain the following w.r.t. vi with examples. (10)
   i) Repeat factor **ii) Deletion**
   iii) Pattern search **iv) Joining lines**
   v) Search and Replace
   b) Write a shell script that displays all the links to a file specified as the first argument. The second argument, which is optional, can be used to specify in which directory the search is to begin. If this second argument, is not present, the search has to begin in current directory. (10)

UNIT – V

9. a) Explain the following: (10)
   i) How do you run a back ground process?
   ii) What is the advantage of **.profile** file?
   iii) What is a regular expression? Explain with an example
   iv) How do you change the priority of process execution
   v) What are the system variables? What is their advantage?
   b) How does **grep** family of commands help in searching a pattern. Explain each with suitable examples. (10)

10. a) What is a process? Explain the steps involved in creation of a process. (5)
    b) Explain the commands used to schedule the execution of processes in UNIX. (8)
    c) What is **sed**? Explain context addressing, line addressing and substitution w.r.t. **sed**. (7)

****