MCA–20(A)

Linux System Administration
(Elective—I)

Master of Computer Application

(MCA-11/16/17)

Fifth Semester, Examination, 2018

Time : 3 Hours   **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** sections A, B and C. Learners are required to attempt the questions contained in these sections according to the detailed instructions given therein.

Section–A
(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. How does the inode map to data block of a file ? Explain with suitable diagram.

2. Explain the various IDs associated with a process. Also describe zombie and orphan processes with suitable example.

3. What is partitioning of a hard disk ? What are the different partitions to be created in Linux ? What is swap partition ?

4. How secured is Linux ? Explain.

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (8) marks each. Learners are required to answer *four* (04) questions only.

1. How are devices represented in LINUX ?

2. What is inode ? Explain with proper diagram.

3. How do you change File Access Permissions ?

4. What are links and symbolic links in LINUX file system ?

5. Discuss the mount and unmount system calls.

6. What is a shell ? Explain any *one* shell.

7. What is Dynamic Host Configuration protocol ? Write a sample dhcpd.conf file.

8. Write the syntax of netstat command and explain its various options.

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.

1. Which signal is generated when we press control-C ?

   (a) SIGINT

(b) SIGTERM

(c) SIGKILL

(d) SIGSEGV

2. What command is used to remove the directory ?

(a) rdir

(b) remove

(c) rd

(d) rmdir

3. To increase the response time and throughput, the kernel minimizes the frequency of disk access by keeping a pool of internal data buffer called :

(a) Pooling

(b) Spooling

(c) Buffer cache

(d) Swapping

4. Which among the following interacts directly with system hardware ?

(a) Shell

(b) Commands

(c) Kernel

(d) Applications

5. Which of the following is not a variant of UNIX ?

(a) Solaris

(b) AIX

(c) IRIX

(d) AS400

6. What does the following command <mknod myfifo b 4 16> do ?

   (a) Will create a block device if user is root

   (b) Will create a block device for all users

   (c) Will create a FIFO if user is not root

   (d) None of the above

7. Which of the following is considered as the super daemon in Unix ?

   (a) sysinit

   (b) init

   (c) inetd

   (d) proc

8. Host specific configuration files are installed in :

   (a) /etc directory

   (b) /lib directory

   (c) /root directory

   (d) /bin directory

9. Which file contains the boot options passed to the kernel ?

   (a) /proc/cmdline

   (b) /proc/root

   (c) /proc/boot

   (d) None of the above

10. Shared memory can be used for :

   (a) read only operations

   (b) append

   (c) read or read write operations

   (d) write only