Roll No. …………………..

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. What is Signal ? How will you handle it ? Explain kill, raise, alarm, pause and about signal.

2. How can a parent and child process communicate ? What is a zombie ?

3. Explain the procedure of Handling Signals and Interrupts.

4. What is the main advantage of creating links to a file instead of copies of the file ?

Section–B

(Short Answer Type Questions)

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

1. How do you change File Access Permissions ?
2. What are links and symbolic links in Linux file system ?
3. Discuss the mount and unmount system calls.
4. What is a shell ?
5. Explain Linux User Security concept.
6. What is PID ? Explain process ID zero and process ID 1.
7. Explain fork( ) system call.
8. Predict the output of the following program code :

   main( )

   {   fork( );

          printf("Hello World!");

   }

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 command is used to set terminal IO characteristic ?

   (a) tty

   (b) ctty

   (c) ptty

   (d) stty

2. Which command is used to display the Unix version ?

   (a) uname –r

   (b) uname –n

   (c) uname –t

   (d) kernel

3. Drivers reside in which environment ?

   (a) Kernel space

   (b) Device space

   (c) Application space

   (d) User space

4. What is not a correct format for entering commands at the command line ?

   (a) command

   (b) command options

   (c) command arguments options

   (d) command options arguments

5. Maximum how long can a Linux filename be ?

   (a) 128 bytes

   (b) 255 bytes

   (c) 32 bytes

   (d) 64 bytes

6. Deleting a soft-link :

   (a) Deletes the destination file

   (b) Deletes both the softlink and the destination file

   (c) Deletes just the softlink

   (d) Backup of the destination is automatically created

7. The permission –rwxr–r– represented in octal expression will be :

   (a) 777

   (b) 666

   (c) 744

   (d) 711

8. Which signal is sent by the command "kill-9" ?

   (a) INT

   (b) TERM

   (c) KILL

   (d) STOP

9. On Linux, Initrd is a file :

   (a) Containing root file-system required during bootup

   (b) Contains only scripts to be executed during bootup

   (c) Contains root-file system and drivers required to be preloaded during bootup

   (d) None of the mentioned

10. UNIX/Linux kernel is :

   (a) Monolithic

   (b) Micro

   (c) Exo

   (d) Nano