Total Pages : 3   **Roll No. ....**

MCA–20A

MCA

(Linux System Administration)

5th Semester Examination, 2024 (June)

Time : 2:00 Hrs.   Max. Marks : 70

Note **:–** This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section–A

(Long Answer Type Questions)   2×19=38

Note **:–** Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

1. What is UNIX operating System ? How will you perform process Management in UNIX Operating System ? Explain system calls related to Multitasking.

2. Explain the UNIX file system. How the UNIX files are organized ? Discuss the same with the aid of a diagram that depicts the organization structure.

3. What is System calls for file I/O ? Explain File Sharing and Concept of File descriptor duplication.

4. What is Process control ? Explain Race condition Zombie and Orphan process.

5. What is Signal handling ? Explain the signals like kill, raise, alarm, pause, and abort.

Section–B

(Short Answer Type Questions)   4×8=32

Note **:–** Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What is Standard I/O Library ? Also explain Streams ?

2. What is Binary I/O and Formatted I/O Temporary Files ? Explain.

3. What do you understand by Environment of Unix Process ? Explain Process invocation and termination.

4. What is Process relationship ? What do you understand by the Sessions under process ?

5. How will you perform Sharing data among parent and Child using Files ?

6. What is the difference between I/O Multiplexing, Memory Mapped I/O.

7. What is Inter Process Communication ?

8. Explain Message Queue and Semaphore.

****