

1C8112

Total No. of Questions : 20

Total No. of Pages : 03

Roll No. :

1C8112

M.C.A. I-Sem. (Main/Back) Exam. - 2024

MCA-103 / Operating System

Time : 3 Hours

Maximum Marks : 70

Min. Passing Marks : 28

Instructions to Candidates :

Attempt all ten questions from Part-A. All five questions from Part-B and three questions out of five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data missing may suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
(As mentioned in Form No. 205)*

1.

2.

PART-A

(Word Limit 25)

[10×2=20]

Q.1. Why is the Operating System important?

Q.2. Give any two benefits of Multiprocessor systems.

Q.3. What do you mean by 'Process Synchronization'?

Q.4. What is Virtual Memory?

- Q.5. What is the advantage of Open source?
- Q.6. Explain the purpose and syntax of ls command of Linux.
- Q.7. What do you understand by a Shell?
- Q.8. What is Metacharacter?
- Q.9. Define LILO.
- Q.10. What is the purpose of init process?

PART - B

(Word Limit 100)

[5×4=20]

- Q.1. What are the different states of a process? Explain.
- Q.2. Differentiate between Logical address and Physical address.
- Q.3. Explain any two process management system calls of Linux.
- Q.4. Differentiate between while and until statements.
- Q.5. Explain the file permission types of Linux.

PART - C

(Any Three)

[3×10=30]

- Q.1. What do you mean by 'CPU Scheduling'? Briefly explain various types of Scheduling Algorithms.
- Q.2. What is deadlock? What are the necessary conditions for deadlock to occur discuss deadlock prevention and avoidance in detail.
- Q.3. Explain the following Commands of Linux :

(a) head

- (b) tail
- (c) cat
- (d) rmdir
- (e) cp
- (f) mv
- (g) rename
- (h) mkdir
- (i) cd
- (j) cut

Q. 4. With the help of suitable examples, discuss various control statements of shell programming.

Q. 5. Write short notes on the following :

- (a) File and Directory types
- (b) System Services

----- X -----