[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2124)

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MCA 3rd Semester Examination

Operating Systems (NS)

MCA-303

Time : 3 Hours **Max. Marks : 60**

: candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all by selecting one question from Section A, B, C and D. Section E is compulsory.

SECTION - A

1. Explain the difference between Simple Batch System and Multi-Programmed batch system. (12)

2. How we can protect our hardware through operating system"? Also discuss the I/O structure of any operating system. (12)

SECTION - B

3. What is an Interprocess communication? What are the advantages of these features in an operating system? (12)

4. What is a Process scheduling? Describe the Round robin scheduling method. (12)

SECTION - C

5. What are Logical and physical Addresses in an operating system structure? Write a page replacement algorithm by using the concept of FIFO. (12)

6. Discuss the concept of acyclic and general graphs. Also describe the various advantages and disadvantages in real life applications. (12)

[P.T.O.]

SECTION - D

7. What is File Allocation Tables in an operating system? Also discuss the advantages if a linear list in an operating system. (12)

8. Describe the structure of UNIX operating system? Also explain the role of compilers and editors in UNIX operating system. (12)

SECTION - E

9. Define the following:

   (a) Define Parallel Systems.

   (b) Batch processing.

   (c) Thrashing.

   (d) What is a deadlock?

   (e) What is demand paging?

   (f) Local and Global Scheduling.

   (g) Process Communication.

   (h) What are the advantages of Hash Table?

   (i) What is GUI?

   (j) What is a fragmentation?

   (k) What is a Kernel?

   (l) What is the use of SCAN in an operating system? (1×12=12)