

**MCA-204/MSCCS-10/
MSCCS-204/MSCCSC-204**

December – Examination 2021

MSCCS/MCA Examination

OPERATING SYSTEM

**Paper : MCA-204/MSCCS-10/MSCCS-204/
MSCCSC-204**

Time : 1½ Hours]

[Maximum Marks : 80

Note :- The question paper is divided into two Sections A and B. Write answers as per the given instructions.

Section–A

4×4=16

(Very Short Answer Type Questions)

Note :- Answer any *four* questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 4 marks.

1. (i) What is virus ? How they infect the computer ?
- (ii) How digital signature is used in day to day life ?
- (iii) What are various method of Deadlock Prevention ?
- (iv) Why is process synchronization needed in OS ?
- (v) How can we login in the UNIX ? List the steps.
- (vi) Define database operating system, list various types of database OS.
- (vii) Give the significance of distributed shared memory.
- (viii) What is digital certificate ?

Section-B

4×16=64

(Short Answer Type Questions)

Note :- Answer any *four* questions. Answer should not exceed **200** words. Each question carries 16 marks.

2. What is the difference between worm and virus ?
How they spread and prevent ?

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3. Define mutual exclusion. Explain with example Lamport's non taken based algorithm for mutual exclusion.
4. Example the Suzuki-Kasami's broadcast algorithm with proof of correctness.
5. What is the critical section problem ? Define busy waiting. Can busy waiting be avoided altogether ?
6. What is distributed deadlock ? Discuss the issues in deadlock detection and resolution.
7. What are the Acid Properties ? Explain the usefulness of each.
8. Explain the design issues related to multiprocessor operating systems.
9. What is 'Kerberos' ? Explain Kerberos architecture.

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