

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

December – Examination 2022

MCA (IInd Year) Examination

OPERATING SYSTEM

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

Time : 3 Hours]

[Maximum Marks : 80

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

Section-A

8×2=16

(Very Short Answer Type Questions)

Note :- Answer all 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 2 marks.

1. (i) Define Process.
- (ii) Define Kernel mode.

- (iii) What is Semaphore ?
- (iv) What is message passing ?
- (v) What is Transaction ?
- (vi) Define locality of reference.
- (vii) Define Cache coherence.
- (viii) Define demand paging.

Section-B **4×8=32**

(Short Answer Type Questions)

Note :- Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 8 marks.

2. Explain mutual exclusion principle in deadlock.
3. What are the need of advanced operating system ?
4. What are the advantages and disadvantages of distributed operating system ?
5. Define Distributed System.
6. What are the different types of distributed file system available ?
7. Explain remote-procedure call in detail.

8. Write a short note on shadow paging.
9. Explain DDBMS components.

Section-C **2×16=32**

(Long Answer Type Questions)

Note :- Answer any *two* questions. You have to delimit your each answer maximum up to **500** words. Each question carries 16 marks.

10. What do you mean by Deadlock Avoidance ?
Explain the use of Banker's algorithm for deadlock avoidance with illustration.
11. Explain protection mechanism illustrating use of protection domain and access control list.
12. What is distributed shared memory ? How is shared memory implemented in DSM system ?
13. What is multiprocessor operating system ? Explain components of multiprocessor operating system.