

13. What is the difference between Loosely Coupled System and a Tightly Coupled System ? Give examples.

MCA-11

December – Examination 2022

MCA Examination

Operating System

Paper : MCA-11

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) Give the definition of Operating System.
- (ii) What is Thread ?

- (iii) List the properties of Real Time System.
- (iv) Name the algorithm used for Deadlock Avoidance.
- (v) What is Device Driver ?
- (vi) What is Multi-processor ?
- (vii) State Critical-section Problem.
- (viii) What is the use of Semaphore ?

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. What is Process ? Describe the life-cycle of a process.
- 3. Write a short note on Deadlock Recovery.
- 4. Draw and explain the structure of a Typical Page Table Entry.
- 5. What is File Pointer ? Explain the various operations of a file.

- 6. Explain how I/O Management is done by the Operating System.
- 7. Write a short note on Cryptography.
- 8. Explain Master Slave Model.
- 9. Discuss in brief the problems solved by the distributed algorithms.

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. Explain FCFS Algorithm and the SJF Algorithm. Compare the average waiting time of both the algorithm.
- 11. What is Deadlock ? Discuss the essential conditions of deadlock with suitable examples.
- 12. What is the difference between Not Recently Used and Least Recently Used Page Replacement Algorithms ? Explain with suitable examples.