

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

June - Examination 2017

**MSCCS-Final/MCA-2nd Year Examination  
Operating System****Paper - MSCCS-10/MSCCS-204/MCA-204****Time : 3 Hours ]****[ Max. Marks :- 100**

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

**Section - A****10 × 2 = 20**

(Very Short Answer Questions)

**Note:** Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) Define computer virus.
- (ii) What do you understand by critical section problem?
- (iii) How shell works as human interface of the system?
- (iv) What do you mean by cache coherency?
- (v) Write the names of types of advanced operating system.
- (vi) What is the significance of hash function in public key cryptography?

- (vii) What do you understand by transaction state?
- (viii) Define multiprocessing.
- (ix) Define authentication in distributed system.
- (x) What do you understand by semaphore?

**Section - B****4 × 10 = 40**

(Short Answer Questions)

**Note:** Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) Write the differences between RISC and CISC.
- 3) Explain the necessary condition to occur a deadlock.
- 4) How regular expression is used to separate the fields in awk programming?
- 5) Discuss the distributed file system architecture.
- 6) Explain the various types of coherence protocols in distributed shared memory.
- 7) Define cryptography. Explain private key cryptography.
- 8) Write the differences between uniform memory access (UMA) and non-uniform memory access (NUMA) architecture.
- 9) Discuss concurrency control using time-stamping in database OS.

**Section - C****2 × 20 = 40**

(Long Answer Questions)

**Note:** Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

- 10) What is a variable in UNIX? Write a shell script to find largest number among 10 numbers.
  - 11) Write a short note on the following:
    - (i) Log-based recovery
    - (ii) Recovery using undo logs check points.
  - 12) Explain Lamport's algorithm of distributed mutual exclusion.
  - 13) Explain RSA algorithm of public key cryptography.
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