

**BCA-07/DCA-102**

June - Examination 2019

**BCA Pt. II/DCA Examination****Operating System - I****Paper - BCA-07/DCA-102****Time : 3 Hours ]****[ Max. Marks :- 70**

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

**Section - A****7 × 2 = 14**

(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) What is Socket? Give an example.
- (ii) Give any two difference between CUI and GUI.
- (iii) List the contents of PCB (Process Control Block).
- (iv) What is Monitor?
- (v) What is Trojan horse?
- (vi) What do you mean by Starvation?
- (vii) What is boot strap loader?

**Section - B****4 × 7 = 28**

(Short Answer Questions)

**Note:** Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 7 marks.

- 2) What is System Call? Explain some of the System Calls.
- 3) What is Swapping and how it is implemented by virtual memory.
- 4) Discuss the strengths and weakness of implementing an access matrix using access list that are associated with objects.
- 5) Why 'Thread' is known as light weight process? Explain the difference between Process and Thread with example.
- 6) Explain the process of Encryption and Decryption process with suitable example.
- 7) Discuss the various techniques for Authentication in System Security.
- 8) Explain the hierarchy of memory organization in a computer with neat diagram.
- 9) What is distributed operating system. Point out its key properties.

**Section - C****2 × 14 = 28**

(Long Answer Questions)

**Note:** Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 14 marks.

- 10) What is Operating System? Explain the classification of Operating System.
11. What is Page Fault? Compare FIFO, Optimal and LRU page replacement algorithm, with an example of your choice.
12. Consider the three processes P1, P2 and P3, whose CPU burst time is as follows:

Process	Burst Time
P1	24
P2	3
P3	3

Calculate average waiting time and average turn-around time using FCFS and SJF Scheduling algorithm.

13. What is race condition? State Critical-Section Problem. Give the solution to the critical section problem.

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