

**TDC Odd Semester Exam., 2020
held in July, 2021**

COMPUTER SCIENCE

(Honours)

(**5th Semester**)

Course No. : BCSH-503

(**Operating System Architecture**)

Full Marks : 35

Pass Marks : 12

Time : 2 hours

The questions are of equal value

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. What do you mean by preemptive and non-preemptive scheduling? Explain the shortest job-first algorithm and discuss its advantages and disadvantages.

2. Give one example showing why FIFO is not an appropriate CPU scheduling scheme for interactive uses.

UNIT—II

3. Explain the mapping of virtual addresses to real addresses under combined segmentation/paging.
4. Discuss the principle of virtual memory management for a multiuser operating system.

UNIT—III

5. Define interrupt. Why does it occur? Illustrate how a system handles and services interrupt.
6. Discuss in detail the various seek optimization strategies.

UNIT—IV

7. What is a computer virus? What is the difference between a virus and a worm?
8. Discuss the notion of transparency in distributed file systems of heterogeneous computers.

(3)

UNIT—V

9. Explain the following terms :

(a) Deadlock avoidance

(b) Deadlock detection

(c) Deadlock prevention

10. What do you understand by critical node section?
Discuss the mutual exclusion problem.

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