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Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (IT) (2015 & Onwards) (Sem.-3)

OPERATING SYSTEMS

Subject Code : BSIT-303

M.Code : 74061

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A**Q1. Answer briefly :**

- a. Define the terms: Multiprogramming and Multithreading.
- b. Differentiate between a short term scheduler and a long term scheduler.
- c. Differentiate between Logical and Physical address space.
- d. What are program threats?
- e. Define the term Pipe and FIFO.
- f. What do you understand by thrashing and its solution?
- g. Define the term file. List various attributes of a file.
- h. Discuss the need of virtual memory.
- i. What is the difference between seek time and rotational latency time?
- j. What do you mean by memory reference string?



SECTION-B

- Q2. What do you mean by CPU scheduling? What are the criteria of selecting scheduling algorithms? Explain with example the Shortest Job First (SJF) scheduling and Round robin scheduling algorithm.
- Q3. What do you mean by page-faults? When do page-faults occur? Describe the action taken by the O.S when page fault occurs.
- Q4. Discuss various methods of file allocation with advantages and disadvantages.
- Q5. Explain the various disk-scheduling algorithms in brief. Find out number of head movements for FCFS, SCAN, LOOK scheduling algorithm for a queue from 0-199 and current head pointer is at 53, 98, 183, 37, 122, 14, 124, 65, 67.
- Q6. Explain the following terms with one example of each :
- a. Multiprogramming
 - b. Multiprocessing
 - c. Time sharing
 - d. Real time operating systems
- Q7. Explain different security techniques with their advantages and disadvantages.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.