



NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620015  
B.TECH. DEGREE (FOURTH SEMESTER)  
BRANCH: COMPUTER SCIENCE AND ENGINEERING  
COMPENSATION ASSESSMENT  
SUB.CODE & TITLE: CSPC43 OPERATING SYSTEMS

TIME: 9.30 A.M. TO 10.30 A.M.

DATE: 02.05.2024

MAX. MARKS: 20

ANSWER ALL QUESTIONS

1. Name the OS components that perform the following operations:
  - i) Determine which process will use the CPU next
  - ii) Allocation of disk space(2)
2. Compare i) thread switching and context switching.
  - ii) Counting Semaphore and Binary Semaphore(4)
3. Consider the following set of processes with the length of the CPU-burst time given in milliseconds:

Process No.	Arrival Time	CPU Burst time
1	0	5
2	1	3
3	3	2
4	5	4
5	6	5

Find the schedule of the processes using the following scheduling policies: i) SRT; ii) RR (TQ = 2 units); and compute the Average Turnaround Time and Average Waiting Time. (5)

4. Write the pseudo code for solving reader and writer problem using semaphores if readers having higher priority. (3)
5. What is inverted page table? What are its advantages? (3)
6. What is fragmentation? What are its types? What the different ways of solving problems associated with fragmentation? (3)

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88.0  
3  
20  
4  
5