

Total No. of Questions : 4]

PD-422

SEAT No. : 1760074

[Total No. of Pages : 2

[6409]-280

S.E. (Computer Science and Engineering (Data Science)) (Insem.)

OPERATING SYSTEMS

(2019 Course) (Semester - IV) (210653)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) Solve Q.1 or Q.2, Q.3 or Q.4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Make suitable assumption whenever necessary.

- Q1) a) What are the different types of operating system explain any 2 type of operating system with proper example. [5]
- b) Explain in details open source operating system. [5]
- c) Explain the following functions of operating system. [5]
- i) Memory Management
  - ii) Process Management

OR

- Q2) a) Explain in detail how multi programming and multitasking operating systems are different from each other. [5]
- b) What is an operating system? List and explain any 2 functions of the operating system. [5]
- c) Explain in details evolution of operating system. [5]
- Q3) a) Explain PCB (Process Control Block) with it's attributes in details. [5]
- b) Explain short term scheduler and long term Scheduler. [5]

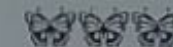
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- c) Illustrate the execution of these process using SJF (Non preemptive) CPU scheduling algorithm by drawing Gantt Chart. Also calculate average waiting time & average turn around time. [5]

Process	Arrival time	Brust Time
P1	3	1
P2	4	4
P3	4	2
P4	0	6
P5	2	3

OR

- Q4) a) Draw and Explain process state diagram in detail. [5]
- b) What is multithreadings? Explain in details. [5]
- c) Discuss RR (Round Robin) process scheduling algorithm. [5]



[6409]-280

2