SEAT No. :

PC404

[6359]-524

S.E. (Artificial Intelligence and Data Science) (Insem)
OPERATING SYSTEMS
(2019 Pattern) (Semester- III) (217521)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

1) Solve questions Q. 1 or Q.2, Q.3 or Q.4.

2) Neat diagrams must be drawn wherever necessary.

3) Figures to the right indicate full marks.

4) Assume suitable data, if necessary.

Q1) a) Discuss in detail time sharing operating system. **[6]**

b) Explain the different issues in operating system design. **[5]**

c) Give the different types of operating system in short. **[4]**

OR

Q2) a) List and explain the different services of operating system. **[6]**

b) Explain the system calls. **[5]**

c) Give four basic shell commands and explain them. **[4]**

Q3) a) Explain the concept of Inter Process Communication. **[5]**

P.T.O.

b) Consider following set of process with their CPU Burst time. Draw Gantt chart FCFS. Calculate average waiting time and average turnaround time. **[6]**

Process	Arrival time	Burst time
P_1	0	4
P_2	1	3
P_3	2	1
P_4	3	2
P_5	4	5

c) Differentiate between Process and Threads **[4]**

OR

Q4) a) Discuss the FCFS process scheduling algorithms **[5]**

b) Draw and Explain process state transition diagram **[6]**

c) Define Threads? Explain Threads Life Cycle. **[4]**