

Total No. of Questions : 4]

SEAT No. :

P-5398

[Total No. of Pages : 2

[6186]-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 different functions of operating system. [6]

b) Explain in detail Time sharing operating system with diagram. [5]

c) Define bash shell? Explain it. [4]

OR

Q2) a) Explain in detail batch operating system. [6]

b) Discuss the system calls. [5]

c) Give the System Programs in operating system. [4]

Q3) a) Explain the concept of Process Control Block with diagram. [5]

b) Discuss SJF process scheduling algorithms. [6]

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

OR

P.T.O.

Q4) a) Draw and Explain process state transition diagram. [5]

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 <sub>1</sub>	0	4
P <sub>2</sub>	1	3
P <sub>3</sub>	2	1
P <sub>4</sub>	3	2
P <sub>5</sub>	4	5

b) Differentiate between Process & Threads. [4]

