Total No. of Questions : 4]

SEAT No. :

PA-43

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S.E. (Artificial Intelligence and Data Science)

OPERATING SYSTEM

(2019 Pattern) (Semester - I) (217521)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***

Q1) a) Differentiate between following types of operating system by defining their essential properties. **[8]**

i) Parallel system
ii) Real time system

b) Explain the basic instruction cycle with appropriate diagram. **[7]**

OR

Q2) a) Explain user operating system Interface in detail. **[8]**

b) What are the various objectives and functions of operating systems. **[7]**

Q3) a) Explain following scheduling algorithms **[8]**

i) SJF
ii) Priority

b) What is dining philosopher problem? Explain its solution with monitor. **[7]**

OR

Q4) a) What is thread? Explain classical thread model. **[7]**

b) Discuss following terms. **[8]**

i) Semaphore
ii) Critical Section
iii) Monitor
iv) Message passing