PA-43

[5931]- 63

S.E. (Artificial Intelligence and Data Science)
OPERATING SYSTEM
(2019 Pattern) (Semester - I) (217521)

[Max. Marks : 30

Time : 1 Hour]
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