SV - 219

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Seat No.	

B.E. (Computer Science & Engineering) (Semester - VIII) (Revised) Examination, May - 2019

REAL-TIME OPERATING SYSTEM (New)

Sub. Code : 67826

Day and Date : Monday, 20 - 05 - 2019 **Total Marks : 100**

Time : 10.00 a.m. to 01.00 p.m.

Instructions : 1) **Attempt any three questions from each section**

2) **Figures to the right indicate full marks.**

SECTION - I

Q1) a) What are RISC and CISC processor architectures? Compare between RISC and CISC processor architectures. **[8]**

b) What are different input/output methods in real time systems? Explain any one in detail. **[8]**

Q2) a) What is important role of kernel in operating systems? Explain synchronous polled loop pseudo kernel. **[8]**

b) Explain interrupt driven systems? How context switching is achieved? **[8]**

Q3) a) How the problem of testing and storing to a particular memory location is achieved in real time systems? Explain with suitable example. **[8]**

b) How Semaphores are used to handle critical section problems? How mailboxes can be used to implement semaphores? **[8]**

Q4) Write Short Notes of Following (Any Three) : **[3 × 6 = 18]**

a) Round Robin Scheduling.

b) Priority Celling Protocol.

c) Cyclic Executives.

d) Intertask communication and synchronization.

P.T.O.

SECTION - II

Q5) a) What are petri nets? How Petri nets are used for requirement analysis? **[8]**

b) What are different elements of structured analysis and design? Illustrate structural analysis using suitable example. **[8]**

Q6) a) State advantages of object oriented languages over procedural languages for design of real time systems. **[8]**

b) What is recursion ? how it is important in real time software design? How recursion is implemented using procedural languages? **[8]**

Q7) a) State the difference between Feature point and Function point ? How feature point metric is computed? **[8]**

b) What are special real time languages ? State real time features of JAVA. **[8]**

Q8) Write Short Note on (Any Three) : **[3 × 6 = 18]**

a) Metric for object oriented software

b) Cost Estimation using COCOMO

c) RT Linux features

d) IC# Language