SV - 215

Total No. of Pages : 2

Seat No.	

B.E. (Comp. Sci. and Engg.) (Semester - VIII) (Revised) Examination, May - 2018
REAL TIME OPERATING SYSTEM
Sub. Code: 67826

Day and Date : Friday, 11 - 05 - 2018 **Total Marks : 100**
Time : 2.30 p.m. to 5.30 p.m.

Instructions : 1) **Solve any three questions from each section.**
2) **Figures to the right indicate full marks.**

SECTION - I

Q1) a) What is Real-Time System? Explain Real-time system design issues. **[8]**

b) Explain Direct Memory Access with block diagram. **[8]**

Q2) a) Explain different instruction forms used in the processors. **[8]**

b) Explain cyclic executives in detail. **[8]**

Q3) a) What are mailboxes? How critical section problems can be handled using mailbox? **[8]**

b) Explain role of kernel in operating systems. **[8]**

Q4) Write a note on : (any three) **[3 × 6 = 18]**

a) Latching

b) Watchdog Timers

c) POSIX

d) Ring Buffers

SECTION - II

Q5) a) Explain requirement engineering process. How requirements are represented? **[8]**

b) Explain Assembly languages and Procedural languages in real-time systems. **[8]**

P.T.O.

Q6) a) How structured analysis is done using structural design? State problems related to structural analysis. **[8]**

b) Explain McCabe's metrics and Halstead's metrics in detail. **[8]**

Q7) a) Draw and explain architecture of RTLinux. **[8]**

b) Explain cost estimation using COCOMO II model. **[8]**

Q8) Write a note on : (any three) **[3 × 6 = 18]**

a) State charts
b) Lines of code metric
c) Petri nets
d) Procedural languages

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