

Seat No.	
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SF - 241

Total No. of Pages :2

B.E. (Computer Science) (Semester - VIII) (Revised)
Examination, November - 2017
REAL-TIME OPERATING SYSTEM
Sub. Code:67826

Day and Date :Friday, 03 - 11 - 2017
Time :10.00 a.m. to 1.00 p.m.

Total Marks : 100

- Instructions :**
- 1) Solve Any Three Questions from each section.
 - 2) Figures to right indicate full marks.

SECTION-I

- Q1) a)** What is Real-Time System? Explain Real-time system examples. **[8]**
- b)** Explain following terminologies related to hardware interfacing: **[8]**
- i) Latching
 - ii) Edge vs Level Triggered
 - iii) Tristate logic
 - iv) IEEE 1394 Firewire
- Q2) a)** Explain memory-mapped I/O with suitable diagram. **[8]**
- b)** Explain operation of mailboxes? How critical section problem can be handled using mailboxes? **[8]**
- Q3) a)** What is priority inversion ? Explain priority ceiling protocol. **[8]**
- b)** Explain task control block model in detail. **[8]**

P.T.O.

Q4) Write a note on- (Any Three)

[18]

- a) Polled loop
- b) Test-and-Set-Instruction
- c) Watchdog timers
- d) Ring Buffers

SECTION -II

Q5) a) Explain requirement engineering process in desing of real time systems.

[8]

b) What are formal methods in software specification? State its limitations.

[8]

Q6) a) Explain how to organize the requirements document.

[8]

b) What is COCOMO? Explain COCOMO-II in detail.

[8]

Q7) a) Explain real-time features of C# and Java.

[8]

b) Explain semaphore and mutex management in RTLinux.

[8]

Q8) Write a note on-(Any Three)

[18]

- a) Mc Cabe's Metric
- b) Function points
- c) RTLinux
- d) Assembly language