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Seat No.	

B.E. (C.S.E.) (Part - II) (Semester - VIII) (Revised) (New) Examination, November - 2019
REAL-TIME OPERATING SYSTEM
Sub. Code : 67826

Day and Date : Friday, 15 - 11 - 2019 **Total Marks : 100**
Time : 2.30 p.m. to 5.30 p.m.

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

SECTION - I

Q1) a) How real time system is defined? State and explain real time system design issues. **[8]**

b) Explain following concepts related to hardware interfacing in real time systems. **[8]**

i) Latching
ii) Tristate Logic
iii) Edge/ Level Triggered
iv) Wait states

Q2) a) With block diagram explain memory mapped input/output method for i/o interfacing in real time system. **[8]**

b) What are interrupts in real time systems? How CPU respond to interrupt? **[8]**

Q3) a) What is POSIX? How real time concurrent events are handled using POSIX? **[8]**

b) Explain different criteria's for selection of real time Kernels? **[8]**

Q4) Write short notes of following (Any Three). **[3×6=18]**

a) Foreground and Background Systems.
b) Hybrid Systems.
c) POSIX
d) Interrupt Service routine.

P.T.O.

SECTION - II

Q5) a) With block diagram explain requirement engineering process for real time systems. **[8]**

b) What are formal methods in software specifications? State its limitations. **[8]**

Q6) a) How parameter passing is achieved in procedural languages? **[8]**

b) State the features of C++ and C# for real time system design. **[8]**

Q7) a) What is need of metrics in real time system engineering? Explain Line of Code Metric in detail. **[8]**

b) Explain how software complexity is measured using McCabe's Metric. **[8]**

Q8) Write short note on (Any Three). **[3×6=18]**

a) COCOMO II Model.

b) Architecture of RT Linux.

c) Real Time JAVA.

d) Procedural Languages.