

Seat No.	
-------------	--

**B.E. (C.S.E.) (Part - IV) (Semester - VIII) Examination,
November - 2018**

REAL - TIME OPERATING SYSTEMS (Revised) (New)

Sub. Code : 67826

Day and Date : Wednesday, 14 - 11 - 2018

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 is a firm real time system ? What are different issues in designing Firm real time system [8]
- b) What is an Event in real time systems? Explain synchronous and Asynchronous events in real time systems. [8]
- Q2) a)** With block diagram explain how peripheral devices are connected to the CPU using programmable interrupt controller. [8]
- b) What are watchdog timers? How the performance in real time systems is enhanced by modifying the architecture? [8]
- Q3) a)** What is priority inversion problem ? How it is solved ? [8]
- b) Using suitable example explain Deadlock ? How it is avoided ? [8]
- Q4) Write Short Notes of Following (Any Three)** [3 × 6 = 18]
- a) Polled loop
 - b) Context Switching
 - c) Background Processing
 - d) Task Control Block Model

P.T.O.

SECTION-II

- Q5)** a) What are Statecharts ? State various components of statecharts. How concurrency is represented? [8]
b) How requirement document is organized for real time systems? How requirements are validated? [8]
- Q6)** a) Explain dynamic memory allocation in procedural languages is achieved? [8]
b) What is real time Java ? How it is implemented ? [8]
- Q7)** a) Explain modified algorithm for Halstead metrics ? How limitations of McCabe's metrics is overcome in Halstead metrics? [8]
b) What are Function points ? How Function point value is calculated? [8]
- Q8)** Write Short Note on (Any Three) [3 × 6 = 18]
a) Special Real Time Languages
b) Line of Code
c) Features of RT Linux
d) Detailed COCOMO

