

P.E.S INSTITUTE OF TECHNOLOGY
BANGALORE SOUTH CAMPUS
DEPARTMENT OF E&C
M.Tech in VLSI AND EMBEDDED SYSTEM
SCHEME AND SOLUTION
FIRST INTERNAL TEST

Faculty: Ananda M
Subject: RTOS

Semester : Second
Subject Code: 14EVE24

Q. No.	Note: Answer FIVE full questions, selecting any ONE full question from each part.	Marks
PART 1		
(1)	(a) RTOS definition → 2 marks Compare Hard Real Time and soft Real Time systems 6 points- 6marks → refer Slides <div style="text-align: right;">Total= 2+6=8</div>	8 marks
(2)	(a) The Characteristics and functions of RTOS: any 8 points→8 marks → refer slides <div style="text-align: right;">Total= 1X 8 =8</div>	8 marks
PART-2		
(3)	(a) Tasks definition → 2 marks and Task states with diagrams→ 2 marks (b) the brief history of Real Time Systems and Embedded Systems→ 2 + 2 =4mark s <div style="text-align: right;">Total= 2+2+2+2 =8</div>	8 marks
(4)	Pseudo code outline of a basic service that polls an input interface for a specific input vector→5 marks, explanation→ 3marks <div style="text-align: right;">Total= 5+3 =8</div>	8 marks
PART 3		
(5)	The Real time service timeline with Hardware Acceleration :diagram→ 4 marks and explanation→4marks <div style="text-align: right;">Total= 4+4=8</div>	8 marks
(6)	the common resources that must be sized and managed in any real time embedded system with main constraints 8 points→ 8 marks <div style="text-align: right;">Total= 8X1=8</div>	8 marks

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	PART 4	
(7)	The key I/O parameters on which response of the systems depends on : 8 points→8marks Total= 8X1=8	8 marks
(8)	Memory Resources definition →2 marks Memory Hierarchy from least to most latency-- diagram→ 2 marks Explanation→ 4marks Total= 2+2+4=8	8 marks
	PART 5	
(9)	Real time service utility→ 3 marks with diagram explain various service utilities: 5 types → 5 marks Total= 3+5=8	8 marks
(10)	The Resource scheduling: Taxonomy diagram →2marks Explain any one type in detail out of two →6 marks Total= 2+6=8	8 marks