Seventh Semester B.Tech. Degree Examination, June 2018  
(2008 Scheme) 
08.705 : REAL TIME OPERATING SYSTEMS (TA) 

Time : 3 Hours  
Max. Marks : 100 

PART – A 

Answer all questions. Each question carries 4 marks. (10×4=40 Marks) 

1. How are address space defined and used under RTOS? 
2. What is a process? Give the commands for create and terminate process. 
3. Define interrupt latency and specify the conditions for its measure. 
4. List out the pros and cons of multiple semaphores. 
5. Brief on the message queuing services defined in RTOS. 
6. Mention the drawbacks of pre-emptive task scheduling mechanism. 
7. Explain the different scenarios in which tasks are killed. 
8. Mention any four kernel primitives. 
9. Enlist the situations under which the system become overloaded. 
10. Mention the data structures adopted for real time kernel design. 

PART – B 

Answer any two questions from each Module. Each question carries 10 marks. (2×10=20 Marks) 

Module – I 

11. Discuss the process management methods used in real time operating system. 
12. Explain the design aspects of saving and restoring of contexts in interrupt handling. 
13. Describe in detail the structure of time systems and performance measures in RTOS. 

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Module – II  
(2x10=20 Marks)

14. Explain the design details of process handling in RTOS.

15. Define priority. Discuss the priority policies applicable for interrupts in RTOS.

16. With suitable algorithm explain any one non pre-emptive task scheduling.

Module – III  
(2x10=20 Marks)

17. Explain the issues and process states of real time kernel.

18. Discuss the requirement and design details of inter-task communication mechanism in RTOS.

19. Describe the complete design details of Micro C/OS II RTOS.