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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SECOND SEMESTER M.TECH DEGREE EXAMINATION, MAY 2016

Electronics & Communication Engineering

(VLSI and Embedded Systems)

04EC6506—Embedded Operating Systems & RTOS

Max. Marks : 60 Duration: 3 Hours

PART A

Answer All Questions

Each question carries 3 marks

1. Write a note on SoC.
2. Discuss about Operating System structure.
3. Describe the architecture of RTOS.
4. What is pipe? Draw its state diagram.
5. What is meant by signals in VxWorks.
6. How the interrupts are handling in VxWorks?
7. List the OS performance guidelines?
8. Discuss the linking process.

PART B

Each question carries 6 marks

9. What are the different classifications of embedded systems? Explain.

OR

10. Describe the Embedded Software Development Process.
11. With an example, explain system call.

OR

12. Briefly enumerate the issues in distributed operating systems.
13. With examples, Explain the following scheduling algorithms:
    (a) Round Robin
    (b) Pre – emptive Earliest deadline first

OR

14. Write notes on the following:
    (a) Task and Task States
    (b) Semaphore and shared data
15. Define message queues. Describe its state diagram, and typical operations.

OR

16. Explain the memory management unit in an RTOS environment.
17. How the tasks are creating in VxWorks? Explain.

OR

18. Describe the working of wind semaphore.
19. What are the functionalities of POSIX?

OR

20. With an example, explain the mapping of Executable images into Target Embedded Systems.