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E - 3064

Reg. No. :

Name :

Sixth Semester B.Tech. Degree Examination, June 2018
(2008 Scheme)
08.606 : EMBEDDED SYSTEMS (F)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. What do you mean by System-on-Chip ?
2. Explain virtual devices with examples.
3. What is software timer ?
4. What is a cross assembler ?
5. What are the parameters at a TCB of a task ?
6. What is meant by reentrant function call ?
7. Explain message queue.
8. What are the two function modes of OS ? Why does an OS function provide two modes ?
9. Explain the task states.
10. What is a spin lock ?

(4×10=40 Marks)

PART – B

Answer **any one** question from **each** Module.

Module – I

11. a) Explain in detail steps involved in writing a physical device driving ISRs in a system. 10
- b) Explain the serial communication using I²C bus and CAN bus. 10

OR

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- 12. a) Explain the timer and counting device in an embedded system. 10
- b) Explain the process of obtaining ROM image in a processor specific in assembly language. 10

Module – II

- 13. a) Explain how queues are used for flow control. 10
- b) Why do you break a program into headers files, configuration files, modules and functions ? 10

OR

- 14. a) Why re-entrant functions are used in embedded system software ? What are its advantages ? 10
- b) Explain in detail use of modifiers in embedded system software. 10

Module – III

- 15. a) Compare the following scheduling strategies.
 - a) Cooperative Scheduling Model.
 - b) Preemptive Scheduling Model. 14
- b) How is mailbox created and used in IPC ? 6

OR

- 16. a) Explain in detail use of semaphore for a task. 14
 - b) Explain Priority Inversion Problem. 6
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