



Reg. No. :

Name :

**Sixth Semester B.Tech. Degree Examination, May 2013
(2008 Scheme)**

**Branch : Information Technology
08.606 : EMBEDDED SYSTEMS**

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. What is meant by ROM image in a system ?
2. What are virtual device drivers ? Give examples.
3. How does Universal Serial Bus work ?
4. Compare Harvard and Princeton memory organisation.
5. Define interrupt latency.
6. What is a spin lock ?
7. Explain performance metric in scheduling models.
8. What are the characteristics of asynchronous communication ?
9. Explain priority inversion problem.
10. What is meant by reentrant function call ?

(10×4=40 Marks)

PART – B

Module – I

11. a) Explain in detail the essential characteristics of an embedded system-on-chip. **10**
- b) Explain with diagram handshaking signals used in UART serial port. **10**

OR

12. Explain in detail relevance of Timer and counting devices in an embedded system. **20**

**Module – II**

13. Which are the queues and buffers used at various layers in network communication ? Explain in detail how queues plays a vital role in network communication. 20

OR

14. a) What are the steps needed to optimise the memory needs of embedded software ? 13

b) Explain in detail use of modifiers in embedded C programming. 7

Module – III

15. Explain in detail use of pipes and remote procedure call IPC's for scheduling and synchronisation. 20

OR

16. Explain with diagram how RTOS responds to a hardware source call on interrupts. 20
