M.Tech(with Credits)-Regular-Semester 2012-Electronics & Communication Engineering Sem II

Embedded System

P. Pages : 1 **GUG/W/16/5984**

Time : Three Hours * 3 6 6 3 * Max. Marks : 70

Notes : 1. All questions carry equal marks. Attempt **any five** questions.
2. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Draw and explain AVR family architecture. **7**

b) Explain memory access and instruction execution with waveforms. **7**

2. a) Differentiate between microprocessor and micro controller. **7**

b) Draw and explain hardware architecture of embedded system. **7**

3. a) Explain the following I/O memory of AVR. **7**
i) SRECn
ii) MCVCR
iii) WDICR

b) Explain interfacing of external SRAM with AVR. **7**

4. a) Explain cost function and hard deadlines. **7**

b) Enlist properties of performance measures. **7**

5. a) Explain structure of a Real Time systems. **7**

b) Explain the following terns under estimating program run times. **7**
i) caches.
ii) virtual memory.

6. a) Differentiate between CISC & RISC. **6**

b) Explain SRECn and MCUCR with respect to I/O memory. **8**

7. a) Explain current program status register. **7**

b) Explain ARM based embedded system hardware. **7**

8. a) Explain the registers of ARM. **6**

b) Explain thumb data processing instruction binary encoding. **8**

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