ELECTIVE - II
Embedded System
(New) (1311)

P. Pages : 2

Time : Three Hours   **Max. Marks : 100**

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** sub questions from each unit.
5. Figures to the right indicate full marks.

UNIT – I

1. a) Define an embedded system. And discuss the need of time to market with diagram in a development of product whose life time is 52 weeks with delay of 4 weeks, also calculate percentage revenue loss with respect to delay entry product.   **10**

   b) Explain recent trends in embedded system.   **10**

   c) Write a short note on :
   i)   Inter Integrated Circuit bus.   **5**

   ii)   Types of testing.   **5**

UNIT - II

2. a) Explain the current program status register in detail.   **10**

   b) Explain ARM core architecture in details.   **10**

   c) i)   Explain 3-stage pipeline in ARM7.   **5**

   ii)   Compare RISC & CISC.   **5**

UNIT - III

3. a) Describe the interfacing of GSM modem to ARM with AT commands.   **10**

b) Explain the process of converting C-program into file for ROM image. **10**

c) Explain interfacing of 16 x 2 character LCD with ARM processor. Write an embedded 'C' code to display "HELLO" on LCD. **10**

UNIT - IV

4. a) i) Define task ? Explain various states of task. **5**

ii) Explain various scheduling algorithm. **5**

b) What do you mean by priority inversion ? And solution for same. **10**

c) i) Enlist the features of μ cos – II ? Explain. **5**

ii) What are the necessary steps of porting RTOS. **5**

UNIT – V

5. a) Discuss "Why Embedded Linux" ? What is Linux distribution. **10**

b) Explain embedded file system. **10**

c) Explain threads with it's advantages & draw backs. **10**

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