

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(EE)(2011 Onwards E-III)
B.Tech.(Electrical & Electronics)(2011 & 2012 Batch E-III)
(Sem.-7,8)**

EMBEDDED SYSTEMS
Subject Code : BTEE-805E
Paper ID : [A3045]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

Q1. Answer briefly :

- a) List the various interrupts present in ARM processor.
- b) List various instruction sets in PIC microcontroller.
- c) What do you mean by interrupt latency?
- d) Elaborate the concepts used during design process in embedded system.
- e) What are the benefits of floating point arithmetic over integer point arithmetic?
- f) What do you mean by bit jump?
- g) What do you mean by direct memory access?
- h) Define RTOS.
- i) Discuss various features of interrupts.
- j) Define assembler.

SECTION-B

- Q2. Explain the Semaphores and shared data in RTOS.
- Q3. Discuss the characteristics of various architectures in embedded systems.
- Q4. What is the significance of register allocation?
- Q5. Explain the various addressing modes in PIC microcontroller.
- Q6. Discuss the function scheduling architecture in software development and tools.

SECTION-C

- Q7. What is embedded system? Explain the various parameters of an embedded system and its significance. Also, explain the embedded system design life cycles.
- Q8. Explain the serial I/O device RS232 and RS485.
- Q9. Explain the various Debugging strategies in software development and tools.