14957

M. Tech 2nd Semester Examination

Advanced Microprocessor & Embedded Systems

EC-204

Time : 3 Hours   **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt any five questions.

1. (a) Explain in detail the functional block diagram of 8085 microprocessor. (10)

   (b) Write a detailed note on Pentium architecture. (10)

2. (a) Discuss physical memory organization in 8086. What is the difference between I/O mapped I/O and memory mapped I/O. (10)

   (b) What do you understand by DMA? Explain operation of 8237 with 8086. (10)

3. (a) Explain in detail the difference between a microprocessor and microcontroller. (10)

   (b) With the help of diagrams, discuss seven segment LED display interfacing with suitable microcontroller. (10)

4. (a) Explain the interrupt structure of PIC microcontroller in detail. (10)

   (b) Explain the characteristics and use of ADC in PIC microcontroller. (10)

5. (a) Explain the use of finite state machine model for event controlled real time programs. (10)

   (b) Explain different issues involved in modelling of multiprocessor system. (10)

6. (a) Explain in detail the difference between RISC and CISC architectures. (10)

   (b) With the help of block diagram, explain the architecture of ARM processor. (10)

7. (a) What do you mean by RTOS? Explain in detail main features of RTOS. (10)

   (b) Write a detailed overview on SOC and ASIC. (10)

8. Write detailed notes on the following:—

   (a) Interrupt Latency (10)

   (b) FPGA (10)