

Roll No

EI/IC-703 (Old)

B.E. VII Semester

Examination, December 2016

Advanced Microprocessor and Micro Controller

Time : Three Hours

Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What do you mean by 16 bit processor?
b) What is an instruction queue in 8086 processor?
c) What are the features of 80286 processor?
d) Draw and discuss the internal block diagram of 8086.

OR

What is coprocessor? Give the features of 8089 I/O processor.

2. a) Give a comparison between microprocessors and microcontrollers.
b) Give the classification of instruction set of 8051.
c) Briefly, describe the interrupt structure of 8051.
d) Write an assembly language program to generate a square wave of 2kHz on any pin of 8051 ports. Assume XTAL=11.0592 MHz. Use timer 1 in model.

OR

Show a typical 8 bit ADC interface with 8051. Also write a program for this interface.

3. a) What are the various way of classifying microcontroller?
b) Give few applications of microcontrollers.
c) Explain the selection criteria for choosing a microcontroller.
d) List the features of 8096 microcontrollers.

OR

- i) Why is RISC important and how it is different from CISC architecture?
ii) Give a comparison between Harvard and Von-Neumann architecture.

4. a) What is pipelining? Explain pipeline flow.
b) What is CSRR register? Explain its configuration in various ARM modes.
c) Give classification of ARM instruction set.
d) Describe the features of ARM 7 TDMI processor.

OR

Write a short notes on development tools for the ARM MCU.

5. a) What is meant by a bus?
b) Give a comparison between synchronous and asynchronous serial data transfer.
c) Briefly explain the RS-232 C serial I/O standard.
d) Describe the features of Inter Integrated Circuit (I²C) bus.

OR

Write a short note on UART.
