Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EE-601 (GS)

B.E. VI Semester

Examination, December 2017

Grading System (GS)

Microprocessor and Microcontrollers

Time : Three Hours ***Maximum Marks : 70***

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. Discuss the register organisation of Intel 8086. Discuss the function of each register.

2. Write the different memory segments used in the 8086 and their functions.

3. Write a program to add two 8-bit data in the 8086 and store the result in the memory.

4. Describe the different program memory addressing modes in the 8086 giving an example for each.

5. Draw the block diagram and explain the operation of 8251 serial communication interface.

6. Explain how data is transferred between the RAM and an I/O device using DMA.

7. How do you classify 8051 instructions based on:
   i) Length of the instruction
   ii) Addressing mode and
   iii) Functions performed

8. Answer any four of the following:
   a) What is the difference between the minimum and maximum mode operation of the 8086?
   b) What is the function of the assembler directives FAR PTR, NEAR PTR and SHORT PTR.
   c) Give the control word format for I/O mode operation in 8255.
   d) Give one example of each for one-byte, two-byte and three-byte instructions of 8051.
   e) How many timers are available in 8051? What are their functions?
   f) How will you interface 8051 microcontroller to the data memory?

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