Roll No ....

EX-6003 (CBGS)

B.E. VI Semester

Examination, May 2018

Choice Based Grading System (CBGS)

Microprocessor and Microcontrollers

Time : Three Hours

Maximum Marks : 70

Note: i)   Attempt any five questions.

ii)   All questions carry equal marks.

1. a) What kind of technology is used in 8086 μp? Explain the modes in which 8086 can operate?   7

    b) Draw and discuss the architecture of 8086. Mention the jobs performed by EU and BIU.   7

2. a) Describe how memory is organized for 8086 μp?   7

    b) Explain the term assembler directive, given a tabular form of assembler directives.   7

3. a) What is the difference between 8254 and 8255 programmable interval timer? List the various modes of 8255. Explain any one mode with waveforms.   7

    b) Draw the architecture of DMA controller. Explain in brief.   7

4. a) What are the different addressing modes of 8051? Explain each with instruction.   7

    b) When used in multiprocessing, which bit in which register is used by a transmitting 8051 to signal receiving 8051's that an interrupt should be generated.   7

5. a) With the help of example explain programming of external interrupts. rgpvonline.com   7

    b) Explain the memory structure of 8051.   7

6. a) Draw and explain 8051 connections to RS-232.   7

    b) Draw and explain the bit pattern of TMOD registers.   7

7. a) Why is PIC program memory 14 bits wide?   7

    b) What do you mean by orthogonal instruction set?   7

8. Write a short notes on any two: 14

    a) Programmable counter array (PCA)

    b) Features and limitation of 32 bit PIC microcontroller

    c) 8096 instruction set

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