

CS / B.Tech (ECE-NEW) / SEM-5 / EC-502 / 2013-14

- b) Write the 8255 PPI control word to configure all the ports as –
 ii) input ports
 iii) output ports in simple I/O mode
- c) Consider the 8253/8254 programmable interval timer. The device is expected to generate a square wave frequency of 1 kHz. Let the clock frequency is 1 MHz. Calculate the count to be loaded in the appropriate counter/timer register
9. a) Write an 8085 ALP to implement the following function :
 $y = mx + c$
 Let (8000H to 8003H) = m , x , c and y
- b) Consider the implementation of the time delay using software in 8085 microprocessor. Let the Loop delay = $T_L = 1.8$ msec, Loop T-states = 14 and Clock frequency = 2 MHz. Calculate the count in decimal (N_{10}) to be loaded in the counter/register
10. Compare the 8085 memory mapped I/O and peripheral I/O techniques. Tabulate your answer, on the basis of different characteristic features.
11. Write short notes on any *three* of the following : 3 × 5
 a) Intel 8086 programming model.
 b) Difference between Intel 8086 & 8088 processors.
 c) DMA data transfer.
 d) Primary features of programmable interrupt controller.
 e) Features of 8051 microcontroller.

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2013

MICROPROCESSOR & MICROCONTROLLER

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP – A****(Multiple Choice Type Questions)**

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10
- i) If the crystal frequency of 8085 microprocessor is 2 MHz, the time required to execute an instruction of 20T states is
 a) 20 μ sec b) 10 μ sec
 c) 40 μ sec d) 5 μ sec.
- ii) The mode 3 operation of 8253 timer is
 a) square wave generator
 b) rate generator
 c) software triggered strobe
 d) hardware triggered strobe.
- iii) The 8086 microprocessor addressing capacity is
 a) 64 kB b) 1 MB
 c) 2 MB d) 1 GB.

5006 (N)

[Turn over

