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Total number of printed pages – 2

B. Tech
PCEL 4303

Sixth Semester Regular Examination – 2014
MICROPROCESSOR AND MICROCONTROLLER

BRANCH : CSE, EEE, ELECTRICAL

QUESTION CODE : F 217

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory and any five from the rest.
The figures in the right-hand margin indicate marks.*



1. Answer the following questions :

2×10

- Write four salient feature of 8085 microprocessor.
- Discuss the PSW register of 8051.
- What is the difference between SI and DI ?
- State the difference between maximum and minimum mode operation of 8086.
- Which register pair in 8085 processor is used as memory pointer ?
- Explain the difference between JUMP and CALL Instruction.
- State the function of RS1 and RS0 bits in the flag register of Intel 8051 microcontroller.
- What condition does logic 0 on the 8086 RD pin indicate ?
- Compare between memory mapped I/O and I/O mapped I/O.
- What is the memory capacity of 80386 in real and protected mode ?

P.T.O.

2. (a) Explain any one of the mode of 8255 PPI in detail. 5
 (b) Explain principle of operation of a DMA controller. How many channels are there in 8257 DMA Controller ? 5
3. (a) Explain, in detail, about memory organization in 8086. 5
 (b) Discuss the various addressing modes of 8086. 5
4. Interface four 16 K × 8 memory chips using 8086. 10
5. (a) Explain the protected mode of 80386. 5
 (b) Explain the interrupt priority of 8051 microcontroller. 5
6. (a) Draw and explain the opcode Fetch machine cycle timing diagram of 8085 microprocessor. 5
 (b) Write a program to generate square wave by using 8255 PPI. 5
7. (a) Explain the predefined interrupt of 8086. 5
 (b) What are the functions of control and status of flags of 8086 ? 5
8. Write short notes on any **two** of the following : 5×2
 (a) Register organization of 8086
 (b) String instructions of 8086
 (c) Demultiplexing the buses of 8085
 (d) USART 8251.

