

SUBJECT CODE NO:- P-246
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E. (CSE/IT) Examination May/June 2017
Microprocessors
(Revised)

[Time:ThreeHours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i) Q.No.1 and Q.No.6 are compulsory.
 - ii) Attempt any two questions from Q. No. 2 to Q. No.5 and any two questions from Q.no.7 to Q. No.10.
 - iii) Figure to the right indicated full marks.

Section A

- Q.1 Attempt any five 10
- a. What is the function of BP and sp registers.
 - b. Draw memory map of TPA in personal computer system.
 - c. List the memory sizes for 8086 to Pentium microprocessor.
 - d. Write function of direction and overflow flag of 8086 microprocessor.
 - e. What is real mode memory addressing?
 - f. Which are the four memory segments of 8086 microprocessors? Give their functions.
 - g. What is the difference between physical and logical address.
 - h. Identify addressing mode of following.
 - i. MOV DX,AX
 - ii. MOV AL, [BP+DI]
 - iii. MOV AL, [DI]
 - iv. MOV AL,[DI+1000H]
- Q.2 a. Explain internal block diagram of 8086 microprocessor. 08
 b. what are addressing modes? Explain data addressing modes. 07
- Q.3 a. Explain miscellaneous data transfer instruction 08
 i. XCHG ii. SAHF iii. LAHF iv. XLAT
 B. Write a assembly language program to find average of 10 elements. 07
- Q.4 a. Explain following instruction in detail with examples. 08
 i. DAA
 ii. AAA
 b. Explain logical instructions of 8086. 07
- Q.5 a. Explain working of stacks. Also explain PUSH and POP instructions with example. 07
 B. Write an assembly language program to find smallest element from an array of 10 elements. 08

Section B

- Q.6 Attempt any five. 10
- A. What is the function of chip select pin of 8255?
 - b. What is the function of QSO and QSI pin of 8086?
 - c. What is the difference between SRAM and DRAM?
 - d. Draw simplified diagram for read bus cycle of 8086 microprocessor
 - e. Explain function of following pins.
 - i. TEST
 - ii. ADO-AD15
 - f. Write the difference between hardware and software interrupt.
 - g. Why is it required to refresh DRAM.?
 - h. Write difference between fixed port and variable post address in IN & out instructions
- Q.7 a. Explain 8055 PPI with suitable diagram 07
 b. Explain different modes of operation for 8254 timer. 08
- Q.8 a. Explain ready and wait state, with suitable diagram. explain how to insert wait states in bus cycle of 8086 microprocessor. 08
 b. Differentiate between minimum mode and maximum mode of 8086 07

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- Q.9 a. What is address decoding? Why address decoding is necessary? Explain with suitable example. 07
- b. What is the use of interrupt vectors and vector table .And explain the location of vector table. 08
- Q.10 a. Explain control word register of 8255 PPI 08
- b. Explain maskable interrupts and non- maskable interrupts of 8086 microprocessors. 07