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Code No: EC1507

GEC-R14

III B. Tech I Semester Supplementary Examinations, July 2017

## MICROPROCESSORS AND INTERFACING

(Information Technology)

Time: 3 Hours

Max. Marks: 60

**Note:** All Questions from **PART-A** are to be answered at one place.

Answer any **FOUR** questions from **PART-B**. All Questions carry equal Marks.

### PART-A

6 × 2 = 12M

1. Explain why 8086 internal architecture is divided into BIU and EIU.
2. Distinguish the ADD and INC instructions.
3. Define Macro with an example.
4. Write the applications of Stepper motor.
5. List out the serial communication standards available.
6. Bring out the difference between 80386DX and 80386SX.

### PART-B

4 × 12 = 48M

1. a) Explain the flag registers of 8086. (6M)  
b) With examples, explain how multiplexing is implemented in 8086 Microprocessor. (6M)
2. a) Explain the following 8086 instructions with examples. (6M)  
i) MUL                      ii) IMUL                      iii) DIV                      iv) IDIV  
b) Explain the following addressing modes of 8086 with example. (6M)  
i) Direct                      ii) Immediate                      iii) Indexed                      iv) Register Relative
3. a) Differentiate between Procedures and Macros using certain examples. (6M)  
b) Write an ALP in 8086 to exchange a block of N bytes of data between Source and Destination. (6M)
4. a) Write a neat block diagram, explain the working of 8257 DMA controller. (6M)  
b) Interface keyboard to 8086 microprocessor and explain. (6M)
5. a) Discuss how 8251 is used for serial communication of data. (6M)  
b) Write short notes on 5 types of interrupts supported by 8086. (6M)
6. a) Draw and explain an architecture of 80386 processor. (6M)  
b) List all the additional features that the 80386 has over 8086. (6M)

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