Code No: R1632023 **R16** SET - 1

III B. Tech II Semester Supplementary Examinations, November - 2019

MICROPROCESSORS AND MICROCONTROLLERS

(Electrical and Electronics Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A (14 Marks)

1. a) Write the features of Pentium processor. [2M]
   b) Differentiate between maximum mode and minimum mode of 8086. [2M]
   c) Explain the FIFO status word of 8279. [2M]
   d) Write short notes on the use of control signals Accumulator (A) and B Register. [3M]
   e) Mention the special function register used by I/O ports in PIC 18F458 microcontroller. [3M]
   f) Write a note on Bitwise shift operator. [2M]

PART –B (56 Marks)

2. a) What is instruction pipelining? Explain in detail. [7M]
   b) Explain memory organization of 8086 microprocessor. [7M]

3. a) What are the different instruction types of 8086? Explain. [7M]
   b) Discuss about the interface signals of the 8086 processor in maximum mode. [7M]

4. a) What is meant by interfacing? Explain the brief description of PPI chip. [7M]
   b) Draw and discuss typical stepper motor interface with 8255. [7M]

5. a) What is the difference between microprocessor and microcontroller? Explain. [7M]
   b) Draw different 8051 port structures and explain them. Also specify the feature of different parallel I/O port available with 8051 microcontroller. [7M]

6. a) List the features of PIC 18xxx microcontroller family. [7M]
   b) Explain about PIC file register. [7M]

7. a) Give brief introduction on PIC18 programming in C. What are the different reasons to use PIC18 program in C? [7M]
   b) Give a brief discussion on logical operators of C. [7M]

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