

**III B. Tech II Semester Supplementary Examinations, April - 2021**  
**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) Define bus? Discuss the A-bus, B-bus and C-bus and their use. [2M]
- b) List out any two addressing modes with example. [2M]
- c) List the features of programmable peripheral interface of 8255. [2M]
- d) Draw the pin diagram of 8051. [3M]
- e) Mention the file register size for PIC chips. [3M]
- f) Write about logical operators in C. [2M]

**PART -B****(56 Marks)**

2. a) What is instruction pipelining? Explain it. [7M]
- b) Explain the architecture of 80286 microprocessor. [7M]
3. a) What are the different types of data memory addressing modes? Explain them. [7M]
- b) Distinguish between a memory read and write machine cycles of 8086. [7M]
4. a) Explain in detail about the interfacing of A to D converter. [7M]
- b) Explain the working of DMA controller (8257) with block diagram. [7M]
5. a) Draw the pin diagram of 8051 and explain the function of various signals. [7M]
- b) Explain interrupt structure of 8051. [7M]
6. a) Compare the various members of PIC18 microcontroller family. [7M]
- b) Write briefly about ROM, RAM and EPROM. [7M]
7. a) Explain I/O programming in C with examples. [7M]
- b) Explain the concept of checksum byte in ROM. [7M]

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