

III B. Tech II Semester Supplementary Examinations, November -2018

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. Answering the question in **Part-A** is compulsory

3. Answer any **THREE** Questions from **Part-B**

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PART -A

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| 1 | a) | List the functions of Bus Interface Unit in 8086. | [3M] |
| | b) | Explain the functionality of the signals INTA and ALE. | [4M] |
| | c) | List variables, suffix and operators used in assembly language programming. | [4M] |
| | d) | Explain the use of handshaking signals in 8255. | [4M] |
| | e) | What is the purpose of PSW register in 8051 microcontroller? | [3M] |
| | f) | What is sourcing and sinking currents w.r.t LED's. | [4M] |

PART -B

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|---|--|
| 2 | a) What are the advantages of using memory segmentation and give the rules associated with it [8M] |
| | b) Explain the function of following registers in 8086 microprocessor: [8M]
i)BP,SP,SI,DI ii)IP and Instruction Queue |
| 3 | Explain memory interfacing with 8086 with the help of block diagram and also explain why two bus cycles are required to access old address word? [16M] |
| 4 | a) What are assembler directives and explain a few with examples. [8M] |
| | b) Write an ALP to sort a given set of 8 – bit unsigned integers in to descending order by any one method. [8M] |
| 5 | a) Explain the different modes of 8255. [8M] |
| | b) Explain the structure of RAM and EPROM. [8M] |
| 6 | a) List and explain in brief about the features of 8051 microcontroller. [8M] |
| | b) Discuss Serial communication control in 8051microcontroller [8M] |
| 7 | a) Discuss the interfacing procedure of Seven segment display with the 8051 microcontroller [10M] |
| | b) List and discuss the industrial applications of 8051 [6M] |

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