

Code No: RT32021

R13**SET - 1****III B. Tech II Semester Supplementary Examinations, November -2018****MICROPROCESSORS AND MICROCONTROLLERS**

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

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- 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**

PART -A

- 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

- 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 8051 microcontroller [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]

