

III B. Tech II Semester Supplementary Examinations, November - 2018**MICRO PROCESSORS AND MICRO CONTROLLERS**

(Common to Electronics and Communication Engineering, Electronics Instrumentation Engineering, Electronics Computer 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**

PART -A

- 1 a) What is stack? Write the operation of stack. [3M]
- b) What is the need of assembler directives? Give two examples. [4M]
- c) Define interrupt and explain the different types of interrupts. [3M]
- d) Define paging Scheme. [4M]
- e) What is the difference between Assembly language and machine level language? [4M]
- f) Write the main features of PIC microcontrollers. [4M]

PART -B

- 2 a) Explain the memory segmentation and instruction Queue of 8086. [8M]
- b) Explain the control and conditional flags of 8086. [8M]
- 3 Give the assembly language implementation for the following: [16M]
 - i)FORLOOP ii) REPEAT iii)IF-THEN-ELSE iv)WHILE
- 4 a) Write the control word formats of 8259. [8M]
- b) Explain the need of DMA. Discuss in detail about DMA data transfer method. [8M]
- 5 a) Describe 80386 flag register with significance of each and every bit in detail. [8M]
How does it differ from 8086?
- b) Discuss the Virtual mode and enhanced mode of 80386. [8M]
- 6 a) Write an assembly language program using 8051 microcontroller instructions to generate a square wave at port 1, pin 0 (i.e., P 1.0). The frequency of the generated square wave is to be 1 kHz. [8M]
- b) Draw the pin diagram of 8051 and Describe the pins. [8M]
- 7 Draw the diagram of ARM architecture and explain the function of each block along with different features in it. [16M]
