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Code No: RT32041 **R13** SET - 1

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**

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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: i)FORLOOP ii) REPEAT iii)IF-THEN-ELSE iv)WHILE	[16M]
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. How does it differ from 8086?	[8M]
	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]

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