

Code No: RT32041

**R13****SET - 1****III B. Tech II Semester Supplementary Examinations, November - 2017****MICRO PROCESSORS AND MICRO CONTROLLERS**

(Common to Electronics and Communication Engineering, Electronics and Instrumentation Engineering and Electronics and 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 compulsory3. Answer any **THREE** Questions from **Part-B**

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**PART -A**

- 1 a) Explain how stack will work in 8086? [3M]
- b) Define Interrupt and write the types of interrupts with one example. [3M]
- c) Write initialization instructions for 8255A to set up PORT A as an O/P port in mode 0. [4M]
- d) What is segmentation in 80386? [4M]
- e) Draw the bit format of PSW register in 8051. [4M]
- f) Write the features of ARM [4M]

**PART -B**

- 2 a) What are addressing modes in 8086? Explain each with an example. [10M]
- b) Explain the following instructions : [6M]  
i) HLT (ii) LOCK (iii) CLI (iv) XLAT V) PUSH VI) POP
- 3 a) Explain the role of stack in calling a subroutine and returning from the routine. [6M]
- b) What is interrupt vector table of 8086? Explain its structure. [10M]
- 4 a) Draw and Explain the architecture of Display controller 8279. [8M]
- b) Explain in detail about semiconductor memory Interfacing. [8M]
- 5 a) Explain about the Instruction set of 80386 micro processor with suitable examples. [6M]
- b) Explain the use of each of the following registers of 80386. [10M]  
Segment descriptor registers (ii) Control registers (iii) Debug and test registers
- 6 a) Write 8051 program to generate 2khz square wave on pin P1.0 port1 using Timer interrupt. [10M]
- b) Discuss the bit format of PSW register of 8051. [6M]
- 7 a) List the interrupts supported by PIC 16C61 and discuss them in brief. [8M]
- b) Design a 16F8XX program to write a byte into the program memory. [8M]

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