R18

Code No: 155CF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, March - 2021

MICROPROCESSORS AND MICROCONTROLLERS

(Common to ECE, EIE)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions

All questions carry equal marks

1.a) Discuss the following addressing modes with examples:
i) Direct ii) Register indirect iii) Base plus index iv) immediate v) Scaled indexed.

b) Write an ALP using 8086 instructions to count the numbers of zeros in a given 8-bit number. [8+7]

2.a) Explain structure of 8086 interrupt vector table with neat diagram.

b) Discuss the functions of segment registers of 8086 with examples. Give some advantages of memory segmentation. [7+8]

3.a) State various modes available for timers in 8051.

b) Explain how interrupts are prioritized? [8+7]

4.a) With example, explain the arithmetic and logic instruction of 8051 microcontroller.

b) Explain the different addressing modes of 8051. [7+8]

5.a) Draw and Explain interfacing of DAC with 8051. Write a program to generate square wave.

b) Explain bit addresses for RAM. [8+7]

6.a) Explain the bit addresses for I/O of 8051

b) Explain the baud rates of serial communication in 8051. [7+8]

7.a) Describe the pipeline operation of ARM.

b) Which are the different features of ARM instruction set that make it suitable for embedded applications. [7+8]

8.a) With a neat diagram, explain the different general purpose registers of ARM Processors.

b) Discuss about the OMAP processor in detail. [8+7]

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