

**R18**

Code No: 156BU

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, February/March - 2022

MICROPROCESSORS AND MICROCONTROLLERS

(Common to EEE, MCT)

Time: 3 Hours

Max. Marks: 75

Answer any five questions  
All questions carry equal marks

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1.a) With the help of neat block diagram, explain the internal architecture of 8086 microprocessor.

b) Explain the significance of memory segmentation. [10+5]

2.a) Explain the functionality of pins used in the minimum mode of 8086 microprocessor.

b) Write an ALP to add two 16bit numbers with carry. [8+7]

3.a) Describe the operation of timers present in 8051 microcontroller.

b) List the various registers present in 8051 microcontroller and explain with an example. [7+8]

4.a) Explain how the 8051 microcontroller transfers the data using serial port.

b) List various addressing modes of 8051 microcontroller and explain them with an example each. [7+8]

5.a) With the help of a neat diagram, show the interfacing of LCD Display with 8051 microcontroller and explain its operation.

b) List instruction command codes for programming an LCD. [9+6]

6. Explain with all necessary sketches to enable intra communications among peripherals using I2C bus. [15]

7.a) Explain about the different exceptions in ARM processors.

b) Draw and explain the structure of program status registers. [8+7]

8.a) Explain register formats used for data processing in Cortex processor.

b) Explain Memory processing and commands used in OMAP processor. [8+7]

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