

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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