

Code No: 156BU

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech III Year II Semester Examinations, August/September - 2021****MICROPROCESSORS AND MICROCONTROLLERS****(Electrical and Electronics Engineering)****Time: 3 Hours****Max. Marks: 75**

Answer any five questions
All questions carry equal marks

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- 1.a) Draw the Functional diagram of 8086 Microprocessor and explain the function of each block in detail.
- b) Explain the procedure how to calculate the Physical address of 8086 Microprocessor. [10+5]
- 2.a) List out different Assembler Directives used in 8086 Microprocessor and explain them.
- b) Explain the different String Manipulations instructions along with examples. [8+7]
- 3.a) Draw and discuss the internal architecture of 8051 family of microcontrollers.
- b) Explain the pin configuration of 8051 controller. [8+7]
- 4.a) Explain the programming development tools In 8051 microcontroller.
- b) Classify and explain the instruction set of 8051 microcontroller. [8+7]
- 5.a) Draw the interfacing diagram of A/D convertor with 8051 Microcontroller and explain its operation
- b) Write short notes on RS-232 communication. [8+7]
6. Explain the following terms in detail:
 - a) SPI Bus
 - b) UART. [7+8]
- 7.a) List out different Program status register instructions I ARM controller and explain each one in detail.
- b) Draw the register organization of ARM Controller and explain the function of each register in detail. [7+8]
- 8.a) Draw the Architecture of OMAP Processor and explain its operation.
- b) List out the important features of OMAP Processor. [10+5]

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