

R18

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**

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 futures of OMAP Processor. [10+5]

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