Code No: 136CT

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, November/December - 2020
MICROPROCESSORS AND MICROCONTROLLERS
(Common to ECE, ETM)

Time: 2 Hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Define Assembler directives and explain different assembler directives used In 8086 processor.
 b) Write an ALP to find largest number in an 8-bit array. [8+7]

2.a) Explain the different Instruction formats used in 8086 programming with one example
 b) Define Flag? Explain the different Flags present in 8086 processor along with Flag register. [8+7]

3.a) List out few compressions of microprocessor and Microcontroller in detail.
 b) Draw the internal circuit diagram of 8051 microcontroller and explain the function of each block in detail. [7+8]

4.a) Explain the following SFRs of 8051 microcontroller in detail:
 i) TMOD   ii) IP   iii) IE
 b) Explain the different serial communication standards with one example of each one. [6+9]

5.a) Draw the interface circuit diagram of Key board with 8051 microcontroller and explain its operation in detail. [7+8]
 b) Explain the following terms in detail:
 i) I²C BUS   ii) SPI BUS

6.a) Draw the frame format of CPSR and explain the function of each bit in detail.
 b) List out different Data processing instruction of ARM processor. [8+7]

7.a) List out different Thumb instructions used in ARM processor.
 b) Draw and explain the internal architecture of OMPA processor. [8+7]

8.a) Draw the register organization of CORTEX processor.
 b) Explain the different applications of CORTEX processor in present generations. [8+7]

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