

R15

Code No: 126ZK

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, July - 2023
MICROPROCESSORS AND INTERFACING DEVICES
(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 75

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

- 1.a) Write the flag register of 8086 μ P. [2]
- b) What is pipe lining? How is it achieved in 8086 μ P? [3]
- c) Define macros in 8086 μ P. [2]
- d) Explain the operation of the following instructions of 8086.
i) MOVSB ii) PUSH iii) RCL [3]
- e) What is Interrupt Vector Table? What is the size of IVT? [2]
- f) Draw CWR register of 8255 and write the significance of each bit. [3]
- g) Write about troubleshoot common issues in a communication interface? [2]
- h) Explain the concept of baud rate and its significance in serial data transfer? [3]
- i) What are the applications of 8051 microcontroller? [2]
- j) What are the I/O ports in the 8051 microcontroller and how many pins do they have? [3]

PART - B

(50 Marks)

2. Explain the different maximum mode signals present in 8086 μ P. [10]
- OR**
3. Draw and explain the interrupt structure of 8086 μ P. [10]
 4. Explain different addressing modes of 8086 μ P with examples. [10]
- OR**
5. Write an ALP to sort ten 8-bit numbers in ascending order. [10]
 6. What is memory address decoding? Design a memory system for 8086 for the following specifications:
a) 32 Kbytes EPROM using 16 Kbyte devices.
b) 64 Kbytes SRAM using 16 Kbyte devices. Draw the memory map. [5+5]
- OR**
7. What are the various modes of operation supported by the 8259 PIC? Explain. [10]

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8. Discuss the RS232C serial data standard and IEEE 488 GPIB standard in detail. [10]

OR

QA QA QA QA QA QA QA G

9. Explain the mode instruction control word format of 8251. [10]

10. Draw and explain the architecture of 8051 Microcontroller. [10]

OR

11. Describe the memory organization of 8051 microcontroller. [10]

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QA QA QA QA QA QA QA G

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QA QA QA QA QA QA QA G