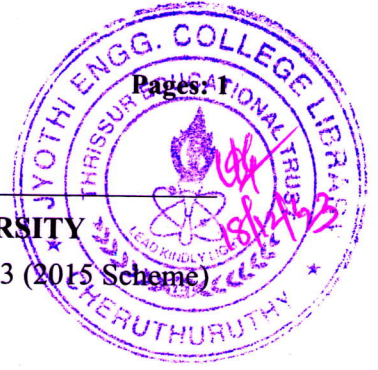


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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth Semester B.Tech Degree (S, FE) Examination December 2023 (2015 Scheme)

Course Code: MR303

Course Name: MICROPROCESSORS AND MICROCONTROLLERS

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks.

- 1 Write short note on flag register of 8086. 5
- 2 Explain briefly about DAA instruction. 5
- 3 Illustrate about modes of operation in 8255. 5
- 4 Discuss about register banks and stack. 5
- 5 With example, explain about Jump instructions in 8051. 5
- 6 Write a 8051 program by treating r6-r7 and r4-r5 as two 16 bit registers. Perform subtraction between them. Store result in 20h (lower byte) and 21h (higher byte). 5
- 7 Write a short note on DAC interfacing. 5
- 8 Discuss briefly about Serial ADC interfacing. 5

PART B

Answer any three questions, each carries 10 marks.

- 9 Illustrate in detail about the architecture of 8086. 10
- 10 With example, explain about processor control instructions. 10
- 11 Sketch and explain the architecture of 8255. 10
- 12 Discuss in detail about the architecture of 8051. 10
- 13 Explain in detail about 8259. 10

PART C

Answer any two questions, each carries 15 marks.

- 14 a) Discuss in detail about 8051 Interrupts 8
- b) Write short notes on call instruction in 8051. 7
- 15 a) Exemplify about the addressing modes of 8051. 8
- b) Discuss briefly about logic instructions in 8051. 7
- 16 Explain in detail about external memory interfacing with 8051. 15
- 17 Write a program to interface stepper motor with 8051. 15