E E7132

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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2017

Course Code: EE309

Course Name: MICROPROCESSOR AND EMBEDDED SYSTEMS (EE)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries5 marks. Marks

1		Explain demultiplexing of Address/Data Bus.	(5)
2		Write a delay subroutine program in 8085 for 0.4 ms. Assume the clock frequency as 3 MHz.	(5)
3		Differentiate between maskable and non-maskable interrupts and list the interrupt related instructions.	(5)
4		Difference between Microprocessor and Microcontroller.	(5)
5		Write an ALP using 8051 to generate a square wave of 50% duty cycle.	(5)
6		Explain SFR's of 8051.	(5)
7		Explain Assembler Directives of 8051.	(5)
8		Explain the function of TMOD and TCON registers of 8051 Microcontroller.	(5)

PART B

Answer any twofull questions, each carries10 marks.

9		Explain the architecture of 8085 microprocessor with the help of a neat functional block diagram.	(10)
10		Draw and explain the timing diagram of LDAX D.	(10)
11	a)	Explain different addressing modes in 8085 with examples.	(6)
	b)	Explain the terms Machine cycle and T-states.	(4)

PART C

Answer any twofull questions, each carries10 marks.

12	a)	Draw the interrupt structure of 8085.	(5)
	b)	Design memory systems to interface 2K ROM and 2K RAM using 2K x 8 bit memory chips.	(5)
13	a)	Give the current trends and challenges in the field of Embedded Systems.	(5)
	b)	Describe the Embedded System product development model.	(5)
14	a)	Explain Assembler, Compiler, Linker and Loader.	(5)
	b)	Draw the block diagram of 8255.	(5)

PART D

Answer any twofull questions, each carries 10 marks.

15		With neat block diagram, explain the architecture of 8051.	(10)
16	a)	Explain the addressing modes of 8051 with examples.	(6)
	b)	Explain how serial port programming is done in 8051.	(4)
17		Show how an LCD can be interfaced with 8051 and also write a program to send 'Y', 'E', 'S' to LCD continuously.	(10)

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