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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S4 (S, FE) Examination December 2024 (2019 Scheme)

Course Code: MRT206

Course Name: MICROPROCESSOR & EMBEDDED SYSTEMS

Max. Marks: 100 Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks)

		Marks
1	Draw the register structure of 8085	3
2	Write about following instructions? STA 2000H and LDA 2000H	3
3	What is partial decoding?.	3
4	What is memory mapped I/O	3
5	What is debugger?	3
6	What is an IDE?.	3
7	What is LJMP in 8051?	3
8	What are the flags affected after ADD operation in 8051	3
9	Write any two advantages of Embedded C Programming	3
10	What is TCON register?	3

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

11	a)	Write short note on Control and status signal of 8085	7
	b)	Write a 8085 ALP program to perform multiplicaation of 2 8 bit numbers	7
12	a)	Write short notes on Serial I/O and Reset signals	7
	b)	Write a 8085 ALP program to perform division of 2 8 bit numbers	7

Module -2

13	a)	Draw and explain the timing diagram of the following Memory read Memory Write I/O Read I/o Write	14

14	a)	Generate a 0.5s delay using 16 bit register pair	7
	b)	Write the features of 8255.	7

Module -3

15	a)	Discuss briefly about different phases of waterfall model , its applications and its advantages	14
16	a)	Write briefly on any one cross compiler.	7
	b)	What are the challenges in embedded system product development	7

Module -4

17	a)	How to access external data memory in 8051	7
	b)	Illustrate PUSH and POP instruction in 8051 with an example	7
18	a)	How to access external program memory in 8051	7
	b)	Explain about the following instructions of 8051 with an example i. XCH , ii. XCHD	7

Module -5

19	a)	Write an embedded C program and explain it's structure	14
20	a)	With the neat sketch, illustrate the process of interfacing and programming of D/A converters	14

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