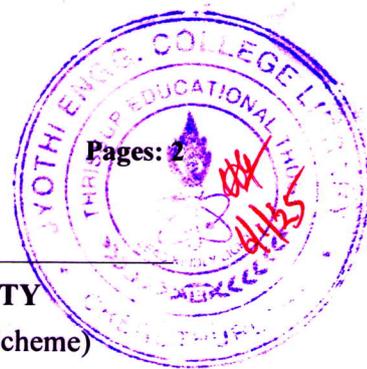


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Reg No.: \_\_\_\_\_

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)*

		Mar ks
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 multiplication 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	14
	Memory read	
	Memory Write	
	I/O Read	
	I/o Write	

- 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 7  
i. XCH , ii. XCHD

**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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