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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer 2019

Course: B. Techin Information Technology **Sem: III**

Subject Name: Microprocessor and Microcontrollers Subject Code: BTITC401

Max Marks: 60 Date:14/05/2019 **Duration: 3 Hr.**

Instructions to the Students:
1. Solve **ANY FIVE** questions out of the following.
2. The level question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

		(Level/CO)	Marks
Q. 1	**Solve following Questions.**		2*6=12
A)	Describe architecture of 8086 microprocessor. List & specify functions of each component.	L2	6
B)	Describe memory segmentation in 8086. How 20 bit physical memory address is generated in 8086 ?	L2	6
Q.2	**Solve following Questions..**		3*4=12
A)	Write assembly language program for reversing the string.	L4	4
B)	What are addressing modes of 8086? Compare direct and indirect register addressing modes with suitable example	L4	4
C)	Explain the following instruction with suitable example: (i) INC. (ii) CMP. (iii) DIV. (iv) LDS.	L2	4
Q. 3	**Solve following questions.**		2*6=12
A)	Describe interrupt vector Table IVT?	L2	6
B)	Draw and explain Architecture of 8259A	L2	6
Q.4	**Solve Any one of the following.**		2*6=12
A)	Draw block diagram of PPI 8255.list and explain any two operation modes of 8255	L2	6
B)	Discuss the architecture of 8251A (USART) with functional block diagram.	L2	6
C)	Draw and explain pin diagram 8087 Math Co-processor	L2	6
Q. 5	**Solve Any three of the following.**		3*4=12
A)	Differentiate between microcontroller and microprocessor	L4	04
B)	Explain TMOD of 8051.	L2	04
C)	Describe RAM ,ROM memory organization of 8051	L2	04
D)	Categorize interrupts in 8051 as per priority.	L4	04

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Q. 6 **Solve the following.**   2*6=12

   A)   Mention features of PIC microcontroller.   L1   6

   B)   Explain Program memory and data memory map of PIC18   L2   6

*** End ***