DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
Winter Semester Examination – December - 2019

Branch: Electrical Engineering **Sem.:- V**
Subject :- Microprocessor & Microcontroller (BTEEC503) **Marks: 60**
Date:- 13/12/2019 **Time:- 3 Hr.**

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Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

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			(Marks)
Q.1.	a)	Draw pin configuration of µp 8085. Explain functions of following pins: i) X1, X2 ii) ALE iii) S_0, S_1	**06**
	b)	How is a SIM instruction used to set interrupts? Illustrate with an example.	**06**
Q.2.	a)	Explain the need of de-multiplexing of AD_0-AD_7 in the memory interfacing with µp 8085. Also explain any one memory mapping scheme.	**06**
	b)	Interface 4k RAM with µp 8085 using 1k×8 RAM.	**06**
Q.3.	a)	What are the types of interrupts in µp 8085? Explain all software interrupts with their vector locations and priorities.	**06**
	b)	What is DMA? Draw and explain pin configuration of DMA IC 8237 in details.	**06**
Q.4.	a)	What are the types of digital to analog converter? Draw pin configuration of DAC 0808.	**06**
	b)	Write an assembly language program to generate square waveform on CRO using an interfacing IC 8255 with µp 8085.	**06**
Q.5.	a)	Draw the functional block diagram of micro-controller 8051 and explain each block in detail.	**06**
	b)	What is program status word register in µc 8051? Draw structure of program status word and explain each flag.	**06**
Q.6.	a)	Explain following instructions of µc 8051: i) MOV A,#55H ii) ADD A,R2 iii) ORG 0H	**06**
	b)	Draw and explain DC motor controller using a Darlington Transistor.	**06**

********** Paper End **********