DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Winter Semester Examination – December - 2018

Branch: B. Tech in Computer Science   **Sem.:- III**
Subject with Subject Code: - Digital Electronics & Microprocessor (BTCOC305)
Date: 10/12/2018   **Marks: 60**   **Duration: - 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. Assume suitable data wherever necessary and mention it clearly.
5. Use of non-programmable scientific calculators is allowed.

		(Marks)
Q.1	**Solve Any Two of the following.**	**12**
A)	Design basic gates with the help of universal gates.	06
B)	Explain different types of Boolean algebra theorems.	06
C)	Explain different types of K-Map representation.	06
Q.2	**Solve Any Two of the following.**	**12**
A)	Calculate $F(A, B, C, D) = \sum m(0,1,2,3,7,8,9,10,11,12,13)$.	06
B)	Calculate $F(A,B,C,D) = \pi M(4,5,6,7,8,12) \cdot d(1,2,3,11,14)$.	06
C)	Compare Multiplexer and Demultiplexer with neat diagram.	06
Q.3	**Solve Any Two of the following.**	**12**
A)	Explain with neat diagram working of S-R Flip-Flop.	06
B)	Write a short note on shift registers and list down its applications.	06
C)	Write a short note on D Flip Flop and T Flip- Flop	06
Q.4	**Solve Any Two of the following.**	**12**
A)	Differentiate between 8085 and 8086 Microprocessors.	06
B)	Explain with neat diagram architecture of 8086.	06
C)	Explain the structure of 8086 PSW.	06
Q.5	**Solve Any Two of the following.**	**12**
A)	Differentiate between I/O mapped I/O and memory mapped I/O of 8086.	06
B)	Explain with neat diagram working of DMA controller.	06
C)	Explain different types of interrupts in 8086.	06
Q.6	**Solve Any Two of the following.**	**12**
A)	Explain with example different types of instruction set of 8086.	06
B)	Explain the various addressing modes of 8086.	06
C)	Write a short note on Procedure and Subroutine.	06

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