

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.

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

***** End *****