DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech. **Branch : COMPUTER ENGG/CSE** **Semester :IV**

Subject Code & Name: BTES405 Digital Logic Design & Microprocessor

Max Marks: 60 **Date: 27/08/2022** **Duration: 3.45 Hr.**

Instructions to the Students:

1. *All the questions are compulsory.*
2. *The level of 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 Any Two of the following.**		**12**
A)	**What is Signal? Write Characteristics of Digital Signals.**	**Analyzing**	
B)	**Explain Digital Gate with their types.**	**Understanding**	
C)	**Write short note on Error Detecting and Correcting Codes.**	**Applying**	
Q.2	**Solve Any Two of the following.**		**12**
A)	**Explain the working of Multiplexer and De-Multiplexer.**	**Understanding**	
B)	**Write and explain with example Don‘t care conditions.**	**Applying**	
C)	**Minimize the four-variable logic function using k-map. $f(A,B,C,D) = \sum m(0, 1, 2, 3, 5, 7, 8, 9, 11, 14)$**	**Applying**	
Q. 3	**Solve Any Two of the following.**		**12**
A)	**Design 3-bit synchronous up counter using JK flip flops**	**Applying**	
B)	**Convert S-R FLIP-FLOP TO J-K FLIP-FLOP.**	**Applying**	
C)	**Write and explain any two applications of flip-flop.**	**Understanding**	
Q.4	**Solve Any Two of the following.**		**12**
A)	**Comparison of 8-bit, (8085) 16-bit (8086), and 32-bit microprocessors (80386)**	**Understanding**	
B)	**Draw and explain 8086 Internal Block Diagram.**	**Understanding**	
C)	**Write short note on Memory .**	**Understanding**	
Q. 5	**Solve Any Two of the following.**		**12**
A)	**Explain different type of Addressing modes of 8086.**	**Analyzing**	
B)	**Write different Data transfer instructions.**	**Analyzing**	
C)	**Write short note on Assemblers and compilers**	**Understanding**	

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