

**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
<b>Q. 1</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
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	
<b>Q.2</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
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	
<b>Q. 3</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
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	
<b>Q.4</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
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	
<b>Q. 5</b>	<b>Solve Any Two of the following.</b>		<b>12</b>
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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