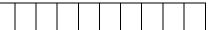
Reg. No



CO₅

PO₁



(i) ROM (iii) PROM

i. The full form of ECL is ___

(i) Emitter-collector logic

GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Third Semester - Regular) Examinations, December - 2020

BESEC 3050 - DIGITAL ELECTRONICS (CSE & CST)

Time: 2 hrs Maximum: 50 Marks

The figures in the right hand margin indicate marks.	
DADT A. (Multiple Choice Questions)	$(1 \times 10 - 10 \text{ Morks})$

PART – A: (Multiple Choice Questions) $(1 \times 10 = 10 \text{ Marks})$ Q.1. Answer *ALL* questions [CO#] [PO#] a. A universal logic gate is one which can be used to generate any logic function. Which of PO₁ CO₁ the following is a universal logic gate? i)OR ii) AND iii)XOR iv)NAND b. The given hexadecimal number (1E.53)16 is equivalent to _____ CO₁ PO₂ i) (35.684)8 ii) (36.246)8 iv)(35.599)8 iii) (34.340)8 c. The expression for Absorption law given by CO₂ PO10 i) A+AB = Aii) (A+AB = Biii) AB+AA' = Aiv)A+B=B+Ad. The inputs/outputs of an analog multiplexer/demultiplexer are _ CO₂ PO₁ (i) Bidirectional (ii) Unidirectional (iv) Binary-coded decimal (iii) Even parity What type of logic circuit is represented by the figure shown below? CO₁ PO₂ (i) XOR (ii) XNOR (iii) AND (iv) XAND f. Internal propagation delay of asynchronous counter is removed by _____ CO₃ PO4 (i) Ripple counter (ii) Ring counter (iii) Modulus counter (iv) Synchronous counter The truth table for an SRFF has how many VALID entries? CO₃ PO₁ i)1 (ii) 2 (iii) 3 (iv)4The chip by which both the operation of read and write is performed CO₃ PO4

(iii)) Emitter coupled logic (iv) Emitter-cored logic

(ii) EPROM

(ii) Emitter-complementary logic

(iv) RAM

j.	Which of the following method is employed for ADC?				CO4	PO2	
	•) Successiveapproximation type i) PWM type	(ii) Ladder network(iv) None of the mentioned				
PART – B: (Short Answer Questions)					$(2 \times 5 = 10 \text{ Marks})$		
<u>Q.2</u>	2. A	nswer ALL questions			[CO#]	[PO#]	
a. What is the decimal equivalent of the number $3A_{16}$?				(CO1	PO1	
b.	b. What is the 1's and 2's complement of binary number 01011000?			(CO1	PO2	
c.	Γ	Define Half adder and full adder			CO2	PO4	
d.	d. Give the comparison between PROM and PLA.				CO3	PO4	
e.	e. What is propagation delay?			(CO4	PO2	
PART – C: (Long Answer Questions)				$(6 \times 5 = 30 \text{ Marks})$			
Answer ANY FIVE questions			Marks	[CO	#] [PO#]		
	3.	Simplify the following Boolean express sum using K-MAP AC'+B'D+A'CD+A		(6)	CO1	PO1	
	4.	Briefly explain about the NOR and NAN	ND implementation	(6)	CO1	PO2	
	5.	Implement the following Boolean functi	on using 4:1 Multiplexer.	(6)	CO2	PO2	
		$F(W, X, Y, Z)=\Sigma m(0, 1, 2, 4, 6, 9, 12,$	14)				
	6.	Explain Moore and Mealy models in de	tail.	(6)	CO3	PO4	
	7.	Design a decade counter using JK Flip F	Flop	(6)	CO3	PO10	
	8.	Elaborate the concept of memory decod	ing, error correction and error detection.	(6)	CO4	PO4	
	9.	Explain the construction, working prince	iple of the following	(6)	CO4	PO2	
		(i)Successive-Approximation A/D Conv	erter.				
1	0.	Explain the working 2 input CMOS NO	R gate in detail	(6)	CO5	PO1	

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