

Department of First Year B. Tech.

Term I (2024-25)

CAE-III

Subject Name- Digital Logic Design (23UESL1105)

[Time: 01 Hour]

[Max. Marks-20]

Instructions to the candidates:

- 1) All questions compulsory.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.
- 5) Other Instructions, if any.

Q No.	Sub Question	CO	Marks	BL
1	(a) What are various types of flipflop? Explain T FF along with logic diag, symbol and Truth Table. OR	CO2	[5]	L1
	b) Difference between combinational circuit and sequential circuits?	CO2	[5]	L4
	c) Draw and Explain Mod-10 Counter circuit along with truth table and K-Map. OR	CO2	[5]	L3
1	(d) What is shift register .What are the types of Register? Explain any one.	CO2	[5]	L3
2	a) Explain with syntax Dataflow style, Behavior style, structure style of architecture in VHDL Programming. OR	CO4	[5]	L4 ZZ
	b) Write VHDL Code for Half adder and draw block diag with truth table.	CO4	[5]	L4
	(c) Write VHDL Code for full adder adder and draw block diag with truth table.- OR	CO4	[5]	L2
	d) Write VHDL Code for full Subtractor and draw block diag with truth table.-	CO4	[5]	L2