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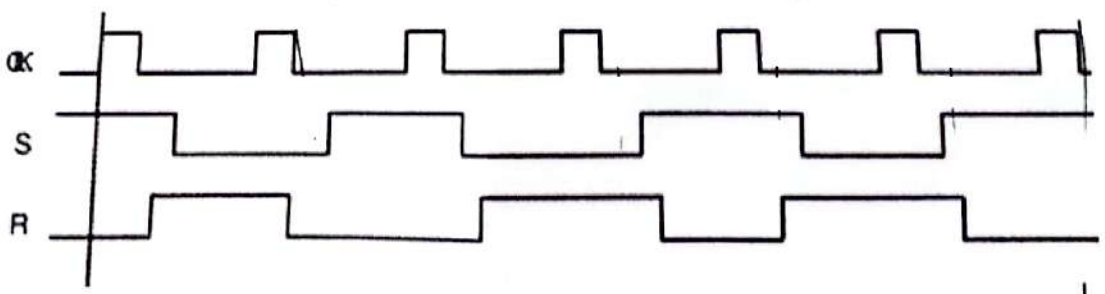
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Midterm Examination, Fall 2022

Course Code: 223, Course Title: Digital Electronics

Level: 2 Term: 2 Batch: 59

Time: 02:00 Hrs **Marks: 40**

Answer ALL Questions

1.	*a)*	A global electrical juncture is now occurring. We must save power in order to get out from this circumstances. You need to develop a system to diminish the amount of power used in your home. Imagine that you had a television, fan, air conditioner, and light in your home, but you can only use two of these at once. Now develop truth table, Boolean expression and circuit for the system.	[10]	CO2
2.	*a)*	Construct 4 to 16 line decoder with four 2 to 4 line decoder.	[5]	CO3
	b)	Construct 4 to 2 line Priority Encoder where I_3 holds top priority.	[5]	
	c)	Implement the following Boolean function with a multiplexer. $F(A, B, C, D) = \sum (0, 2, 4, 5, 8, 10, 11, 14)$	[5]	
3.	*a)*	Compare sequential circuit and combinational circuit.	[5]	CO4
	b)	Determine the output states Q and Q' for S-R flip flop, given the following pulse inputs. 	[10]	