

IE1204 Digital Design Answer Form April 2024

Anonymized Code			
#	Answer with	Answer	Points
1	Decimal number		
2	8 bit two's complement hexadecimal number	0x	
3	8 bit two's complement hexadecimal number	0x	
4	Boolean expression, Y =		
5	Circuit number		
6	Boolean expression, Y =		
7	MUX connections, Boolean expression or Gate		
	Row CD = 00		
	Row CD = 01		
	Row CD = 10		
	Row CD = 11		
8	<p>Timing diagram</p> <p>The timing diagram shows two signals: CLK and Q. The time axis is marked from 0 ms to 45 ms in 5 ms increments. CLK is a square wave with a period of 10 ms. Q is a square wave that is high from 0 to 5 ms, then follows the CLK signal with a delay of approximately 2 ms.</p>		
9	Flip-Flop or Latch #		
10	Maximum clock frequency =	GHz	
	Is the Hold time constraint ok?	[] Yes [] No	
11	Number of states =		
	Final state $Q_3Q_2Q_1Q_0 =$		
12	Boolean expression Y =		
	Input $D_3D_2D_1D_0 =$		
13	16 bit two's complement hexadecimal Product A x B	P	
14	8 bit two's complement hexadecimal Quotient (A / B) and Remainder	Q	R
15	8 result bits ($S_7 S_6 S_5 S_4 S_3 S_2 S_1 S_0$)		
16	Memory contents, 8 decimal digits		
TOTAL POINTS		Examiner sign	