

# IE1204 Digital Design Answer Form 2024-10-24

Anonymized Code																																											
#	Answer with	Answer	Points																																								
1	Decimal number																																										
2	8 bit two's complement <b>hexadecimal</b> number	0x																																									
3	8 bit two's complement <b>hexadecimal</b> 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	Timing diagrams																																										
		<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td style="width: 5%;">0 ms</td> <td style="width: 5%;">5 ms</td> <td style="width: 5%;">10 ms</td> <td style="width: 5%;">15 ms</td> <td style="width: 5%;">20 ms</td> <td style="width: 5%;">25 ms</td> <td style="width: 5%;">30 ms</td> <td style="width: 5%;">35 ms</td> <td style="width: 5%;">40 ms</td> <td style="width: 5%;">45 ms</td> </tr> <tr> <td>CLK</td> <td colspan="9"></td> </tr> <tr> <td>Q1</td> <td colspan="9"></td> </tr> <tr> <td>Q2</td> <td colspan="9"></td> </tr> </table>	0 ms	5 ms	10 ms	15 ms	20 ms	25 ms	30 ms	35 ms	40 ms	45 ms	CLK										Q1										Q2										
0 ms	5 ms	10 ms	15 ms	20 ms	25 ms	30 ms	35 ms	40 ms	45 ms																																		
CLK																																											
Q1																																											
Q2																																											
9	Flip-Flop #																																										
10	Maximum circuit delay $t_{pd} =$	ps																																									
	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 <b>hexadecimal</b> Product A x B	P 0x																																									
14	8 bit two's complement <b>hexadecimal</b> Quotient (A / B) and Remainder	Q 0x	R 0x																																								
15	8 result bits ( $S_7 S_6 S_5 S_4 S_3 S_2 S_1 S_0$ )																																										
16	Memory contents, 8 hexadecimal digits																																										
TOTAL POINTS		Examiner sign																																									