

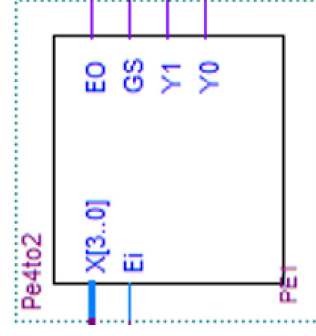
Started on	Thursday, 9 December 2021, 6:08 PM
State	Finished
Completed on	Thursday, 9 December 2021, 6:37 PM
Time taken	28 mins 17 secs
Grade	18.3 out of 20.0 (91%)

## Question 1

Correct

Mark 3.5 out of 3.5

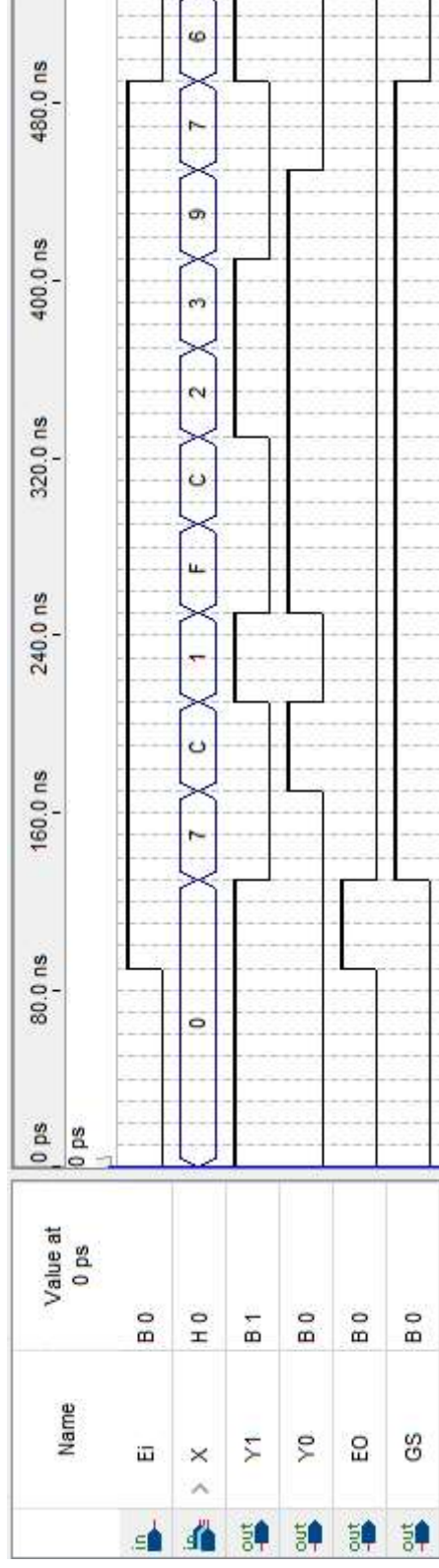
Considere o codificador de prioridade da figura com a respectiva tabela de verdade.

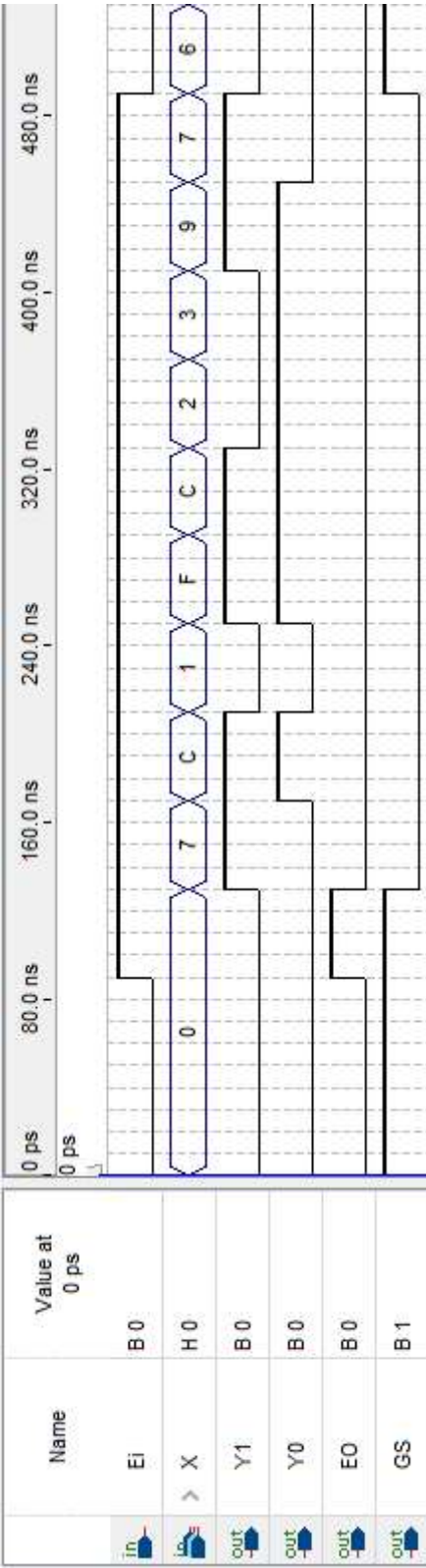
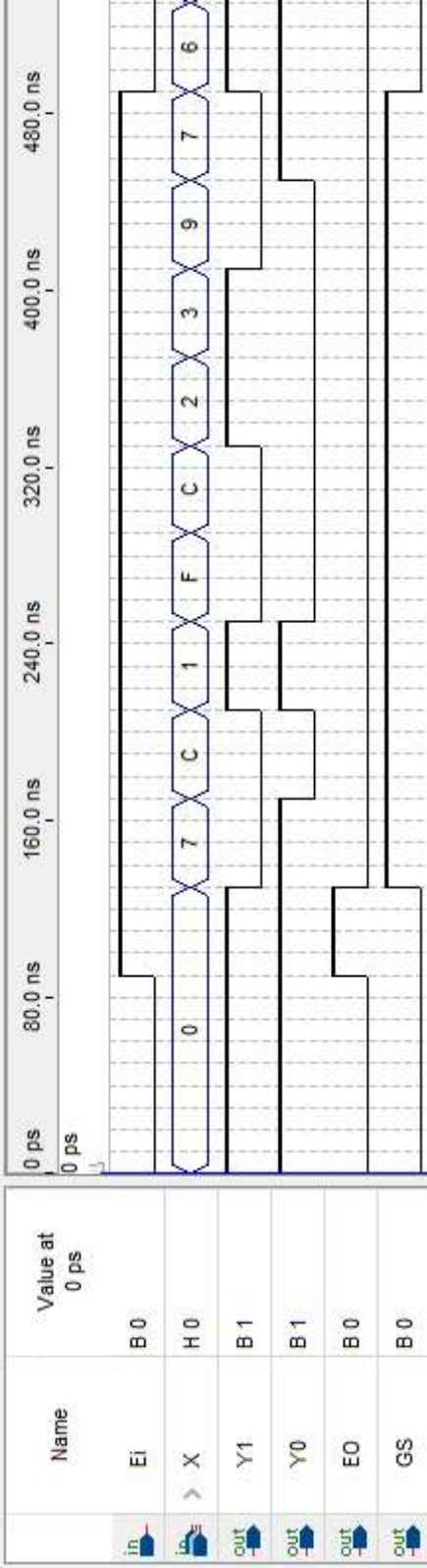


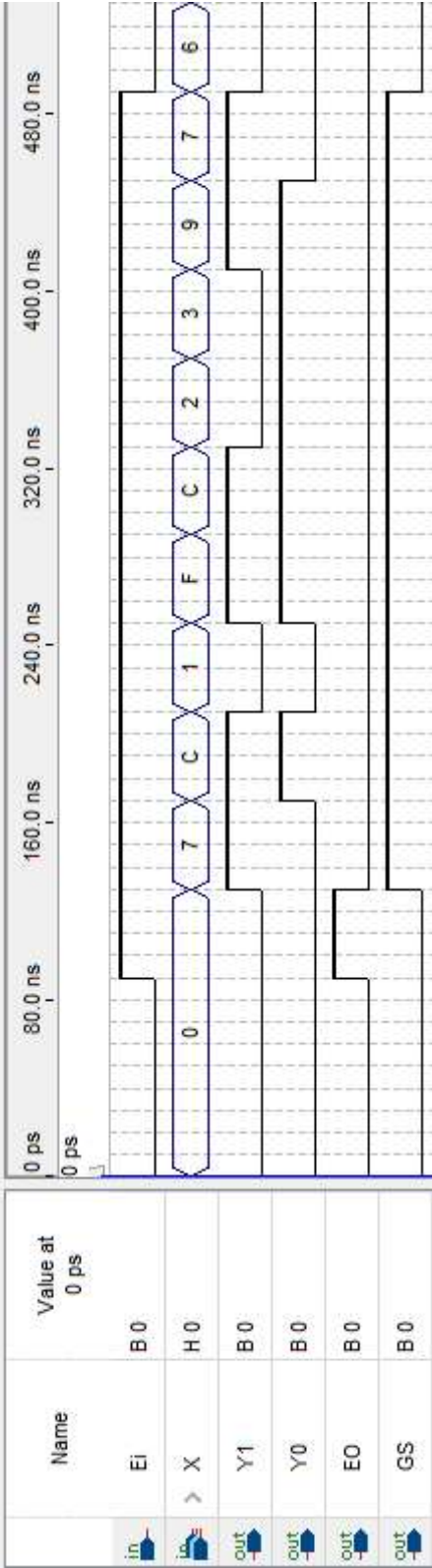
Inputs					Outputs			
Ei	X3	X2	X1	X0	EO	GS	Y1	Y0
1	0	0	0	0	1	0	0	0
1	0	0	0	1	0	1	0	0
1	0	0	1	-	0	1	0	1
1	0	1	-	-	0	1	1	0
1	1	-	-	-	0	1	1	1
0	-	-	-	-	0	0	0	0

Escolha o diagrama temporal adequado

Select one:





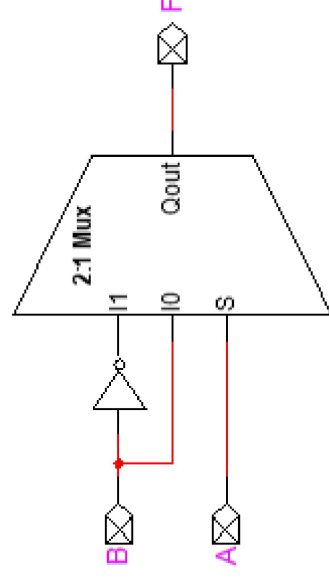


Question **2**

Correct

Mark 3.0 out of 3.0

Tendo em conta o circuito lógico da figura



Select one:

- ☒  $F = A \text{ xor } B$
- ☐  $F = A + B'$
- ☐  $F = A.B'$
- ☐  $F = (A \text{ xor } B)'$

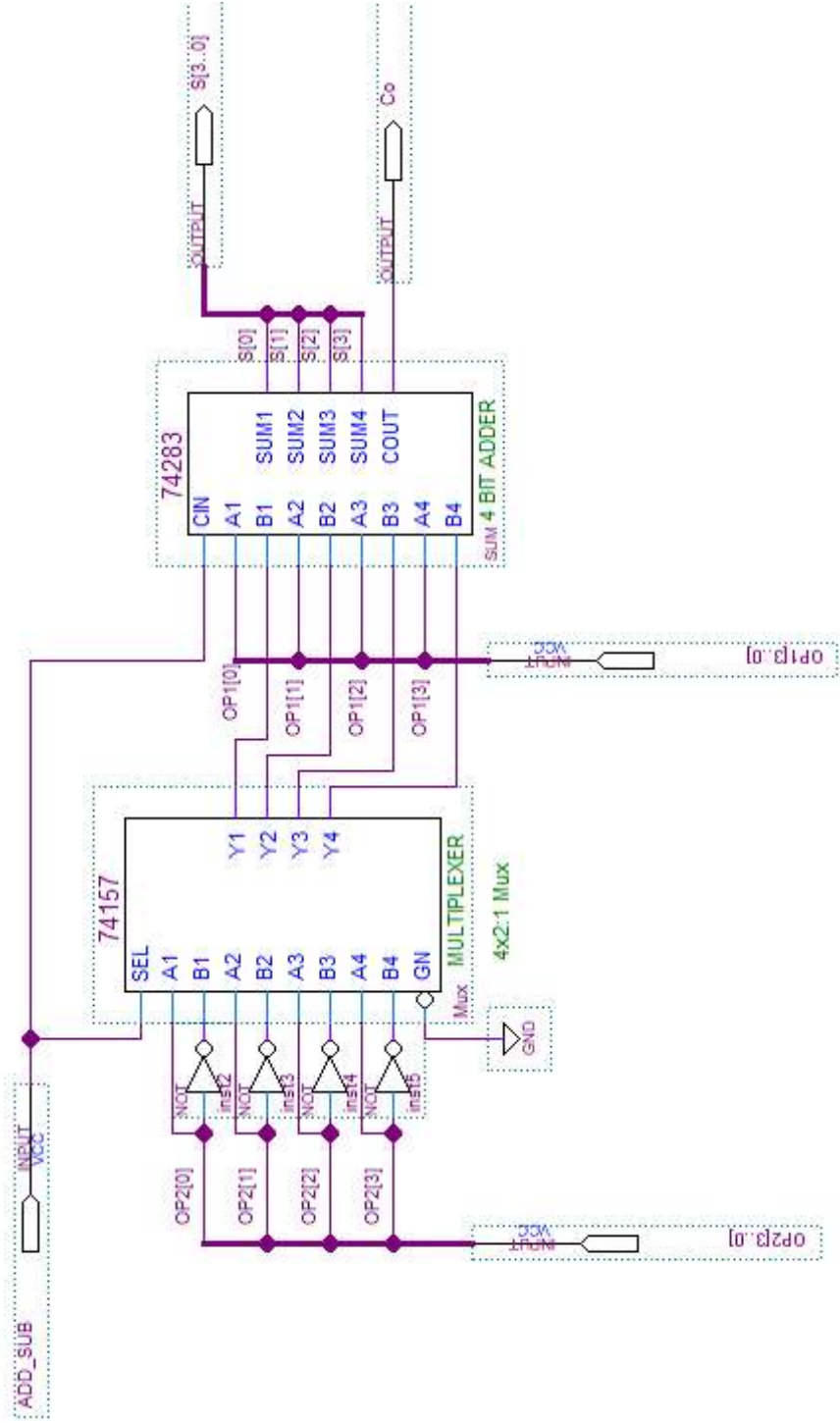


Question 3

Partially correct

Mark 1.8 out of 3.5

O circuito da figura apresenta um sistema de adio/subtrao para 4 bits num contexto de representao em complemento para 2.



Considere OP1 = 1111 e OP2 = 0111.

Select one or more:

- ☐ Com ADD\_SUB = 0, S = 1000 e há overflow
- ☐ Com ADD\_SUB = 0, S = 1000
- ☒ Com ADD\_SUB = 0, S = 0110
- ☐ Com ADD\_SUB = 1, S = 0110
- ☐ Com ADD\_SUB = 1, S=0110 e há overflow
- ☐ Com ADD\_SUB = 1, S = 1000

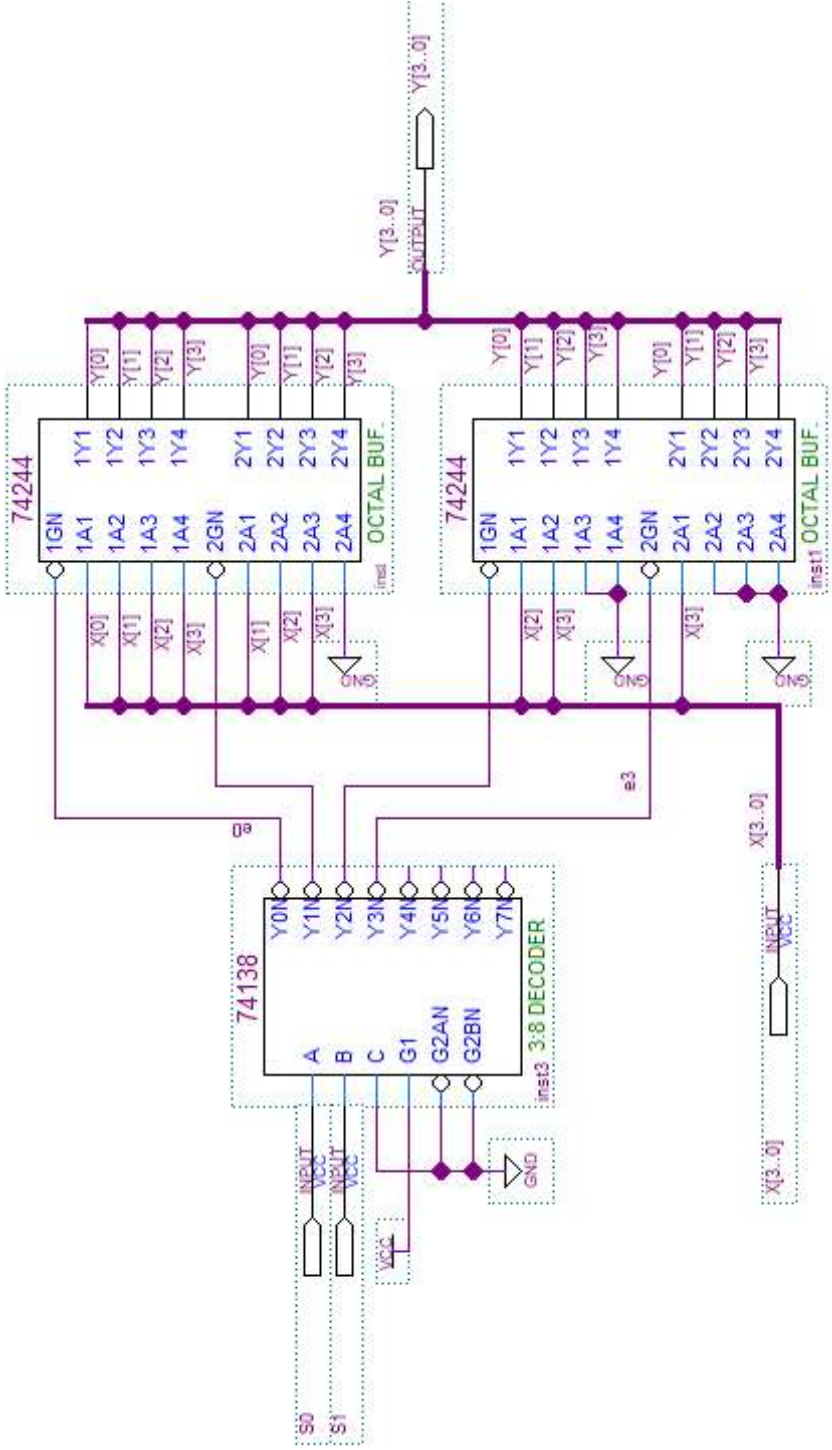


Question **4**

Correct

Mark 4.0 out of 4.0

Considere o esquema lógico da figura baseado no descodificador 74138 e em buffers 3's 74244.



Se entradas forem  $S = (S_1 S_0) = 10_2$  e  $X = (X_3, \dots, X_0) = F_{16}$ , o valor decimal da saída  $Y = (Y_3, \dots, Y_0)$  será:

Answer: **✓**

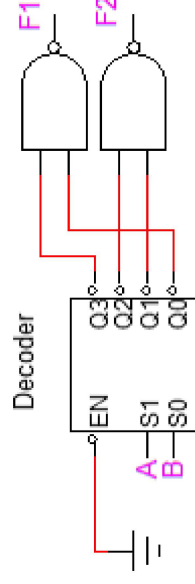


Question **5**

Correct

Mark 3.0 out of 3.0

Considere o circuito lógico da figura.



Neste caso é possível deduzir que

Select one:

- ☐  $F1 = (A + B)'$  e  $F2 = (A + B)$
- ☒  $F1 = (A \text{ xor } B)'$  e  $F2 = (A \text{ xor } B)$
- ☐  $F1 = (A + B)$  e  $F2 = (A + B)'$
- ☐  $F1 = (A \text{ xor } B)$  e  $F2 = (A \text{ xor } B)'$

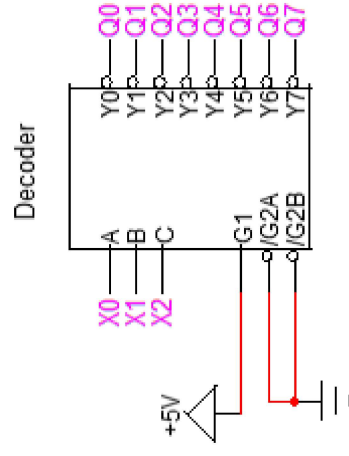


Question **6**

Correct

Mark 3.0 out of 3.0

Considere o bloco combinatório da figura.



Sejam  $X = (X_2, X_1, X_0)$  e  $Q = (Q_7, \dots, Q_0)$ . Se  $X = 3_8$  então

Select one:

- ☐  $Q = 08_{16}$   
☐  $Q = 40_{16}$   
☒  $Q = F7_{16}$   
☐  $Q = DF_{16}$



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