

Q1)

$$R_{24} \leftarrow M[R_{20}]$$

$MW = 1$ write

$$R_{20} \rightarrow \text{11000}$$

$$2^5 = 2^5 = 32$$

ⓑ as $AA = 0 \times 18 = 24$
 $(16^0 \times 8) + (16^1 \times 1) = 24$

ⓐ as $AA = 0 \times 14 = 20$
 $(16^0 \times 4) + (16^1 \times 1) = 20$

Q2)

$$2^4 = 16$$

Q4) $2^3 + 2^5 + 2^5 + 1$

$$= 3 + 8 + 8 + 1 = 14$$

Q8) $R_{30} \leftarrow R_{20} \text{ AND } R_{16}$

$FS = 01000$

(B) AS $MD = 0$

Q9)

Using Q11,

$$\begin{array}{r} 101 \\ 111 \\ \hline S_2 Y \end{array}$$

$$\begin{array}{r} 110 \\ 010 \\ \hline S_1 Y' \end{array}$$

	00	01	11	10
0				1
1		1	1	1

$$S_2 Y_i + S_1 Y_i$$

$$A_2 = S_2 Y_2 + S_1 Y_2'$$

Q11)

S_1

S_2	S_1	S_0	A	B	Cin
0	0	0	0000	X	0
0	0	1	0000	X	1
0	1	0	\bar{Y}	X	0
0	1	1	\bar{Y}	X	1
1	0	0	Y	X	0
1	0	1	Y	X	1
1	1	0	1111	X	0
1	1	1	1111	X	1

S_2	S_1	Y_i	A	S_2	S_1	A
0	0	0	0	0	0	0000
0	0	1	0	0	1	\bar{Y}
0	1	0	1	1	0	Y
0	1	1	0	1	1	1111
1	0	0	0			
1	0	1	1			
1	1	0	1			
1	1	1	1			

(2, 5, 6, 7)

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