

CS1356 Introduction to Information Engineering

Homework 2 Answer

1.

(a)15 (b)-13 (c)13 (d)-16 (e)-9

2.

(a)01100 (b)10100 (c)11111 (d)00000 (e)01000

3.

(a)01101 (b)00000 (c)10000(overflow) (d)10001

(e)01110 (f)10011(overflow) (g)11110 (h)01101

(i)10000(overflow) (j)11111

4.

(a)

$$\begin{array}{r} 00111 \\ + 00001 \\ \hline 01100 \end{array}$$

(b)

$$\begin{array}{r} 00111 \\ + 11111 \\ \hline 00110 \end{array}$$

(c)

$$\begin{array}{r} 01100 \\ + 11100 \\ \hline 01000 \end{array}$$

(d)

$$\begin{array}{r} 01000 \\ + 11001 \\ \hline 00001 \end{array}$$

(e)

$$\begin{array}{r} 00111 \\ + 11111 \\ \hline 00110 \end{array}$$

(f)

$$\begin{array}{r} 00101 \\ + 10101 \\ \hline 11010 \end{array}$$