(Q1)

(1) 111111_8

Hexa:
$\underset{0}{0}\underset{0}{0}\underset{4}{1}\underset{1}{1} \quad \underset{8}{1}\underset{4}{1}\underset{2}{1}\underset{1}{1} \quad = \quad \boxed{3\ F}$

Decimal:
$\underset{0}{0}\underset{0}{0}\ \underset{32}{1}\underset{16}{1}\underset{8}{1}\underset{4}{1}\underset{2}{1}\underset{1}{1} \quad = \quad 63$

$\begin{array}{r} 32 \\ 16 \\ 8 \\ 4 \\ + \quad 2 \\ 1 \\ \hline 63 \end{array}$

Octal:
$\underset{4}{1}\underset{2}{1}\underset{1}{1} \quad \underset{4}{1}\underset{2}{1}\underset{1}{1} \quad = \quad 7 \ 7$

32748 ...

(2) 0101111

Hexa:
$\underset{0}{0}\underset{0}{0}\underset{2}{1}\underset{0}{0} \quad \underset{8}{1}\underset{4}{1}\underset{2}{1}\underset{1}{1} \quad = 2\ F$

Decimal:
$\underset{0}{0}\underset{32}{1}\underset{0}{0}\underset{8}{1}\underset{4}{1}\underset{2}{1}\underset{1}{1} \quad = 47$

$\begin{array}{r} 32 \\ + \ 8 \\ 4 \\ 2 \\ 1 \\ \hline 47 \end{array}$

Octal:
$1 0 1 \quad 111 \quad = \quad 5 \ 7$

③ 0000 10101

Hexa:

0 0 0 1 0 1 0 1   = 1 5

Decimal
 1 0 1 0 1   = 21

Octal:
 0 1 0 1 0 1   = 2 5

$\times 16$
4
1
21

(Q4)
ⓥ 45A

Binary:

4   5   A=10

01 00   0101   1010

$\boxed{10001011010}$

Decimal:
45A   A,10
$\left(4 \times 16^2\right) + \left(5 \times 16^1\right) + \left(10 \times 16^0\right)$ = 1114

Octl: 010 001 0 11 010
$\boxed{2 1 3 2}$

(2) 9F 23

Ⓐ

Ⓑ Binary:

9 → 4   F → 21   8 → 2   8 → 21

1 001   1111   0010   0011

Decimal

$(9 \times 16^3) + (15 \times 16^2) + (2 \times 16) + 3 = 40739$

Octal:

~~1~~ 00 111 110 010 011

4   7   6   2   3

001 111 100 100 011

| 1 | 7 | 4 | 4 | 83 |

(3) BB

B = 11

Binary:

8 → 4   144 → d

| 1 011   1 011 |

Decimal:

$(11 \times 16) + 11 = 187$

Octal:

010 1 11 011
 2   7   3

(Q3)

(1) 45

Binary:

101101

$2\,|\,45$
$2\,|\,22 - 1$
$2\,|\,11 - 0$
$2\,|\,5 - 1$
$2\,|\,2 - 1$
$2\,|\,1 - 0$
$\quad\ 0 - 01$

Hexa:

2D

$16\,|\,45$
$16\,|\,32 \rightarrow 13$
$16\,|\,2 - 0$
$\quad\ 0 - 02$

Octal:

101 101
 5   5

(2) 98

Binary:

101 00010   1100010

$2\,|\,98$
$2\,|\,49 - 0$
$2\,|\,24 - 1$
$2\,|\,12 - 0$
$2\,|\,6 - 0$
$2\,|\,3 - 0$
$2\,|\,1 - 1$
$2\,|\,0 - 1$
$\quad\ 0 - 0$

Hexa:

62

$$\begin{array}{r|l} 16 & 98 \\ \hline 16 & 98 - 2 \\ & 6 \\ 16 & 0 - 6 \\ & 0 - 0 \end{array}$$

Octal:

001 100 010

| 1 | 4 | 2 |

(3) 10

Binary:

1010

$$\begin{array}{r|l} 2 & 10 \\ \hline 2 & 5 - 0 \\ 2 & 2 - 1 \\ 2 & 1 - 0 \\ 2 & 0 - 1 \\ & 0 - 0 \end{array}$$

Hexa:

1010 → [A]

Octal:

001 010
 1   2

(04)   Octal:

(1)   12

Binary:

4 21   4 21

| 0 01 | 010 |

↓

|1010|

Hexa:

$$10 \Rightarrow \boxed{A}$$

0 Decimal:

$$\boxed{10}$$

4) 89

Binary:

44   421

Not possible ⇒ invalid

Hexa:

Invalid

Decimal:

Invalid

3) 67

Binary:

44   421

$$\boxed{110 \quad 111}$$

Decimal:

48+ 7 $= \boxed{55}$

Hexa:

0011 0111

$$\boxed{3 \qquad 7}$$