Manya Gandhi
24BCA012

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Practical - 3

Q.1 $(3A)_{16}$

3 → $(0011)_2$

10 → $(1010)_2$

$(0011\,1010)_2$

$(?)_{10}$:

$1 \times 2^5 + 1 \times 2^4 + 1 \times 2^3 + 1 \times 2^1$

$= 32 + 16 + 8 + 2$

$= (58)_{10}$

Q.2 $56_{10} - 21_{10} = 25_{10}$

$(0001\,1001)_2$

Q.3 $7_{10} - 4_{10} = 3_{10}$

$(00000011)_2$

Q.4 $5 + 3 = 8_{10}$

$(1000)_2$

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Q.5

Q.6

1111	1111	0010
↓	↓	↓
15	15	2
↓	↓	↓
F	F	2

$(FF2)_{16}$

Q.7 $(532.2)_8$ →

$5 \times 8^2 + 3 \times 8^1 + 2 \times 8^0 + 2 \times 8^{-1}$

$5 \times 64 + 3 \times 8 + 2 \times 1 + 2 \times \frac{1}{8}$

$320 + 24 + 2 + 0.25$

$= (346.25)_{10}$

Q.8 421

Q.9 $\frac{4}{8}$ bits

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Q10 $(24)_8$

2 4
010 100

$(010100)_2$

Q11 110 110 001 010

6 6 1 2

$(6612)_8$

Q12 $(425.1640625)_{10}$

Q13 1 F 2
1 E(14) 2
0001 1110 0010
0001 1110 0010
$1\times2^9 + 2^7\times1 + 2^6\times1 + 2^5\times1 + 2^1\times1$
$= 256 + 128 + 64 + 32 + 2$
$= (482)_{10}$

Q.14 The equation is true, For any value of x.