Date

PRACTICAL 3

1. Decimal equivalent of $(3A)_{16}$

$$\underset{\downarrow}{3}\quad \underset{\downarrow}{A}$$
$$3 \quad 10$$

$$\Rightarrow 10 \times 16^{0} + 3 \times 16^{1} = (58)_{10}$$

2. 8 bit unsigned binary of $(56)_{10} - (31)_{10}$

$$(56)_{10} - (31)_{10} = (25)_{10}$$
$$\downarrow$$
$$(00011001)_{2}$$

3. Result of adding $(7)_{10}$ & $(-4)_{10}$

$$(7)_{10} + (-4)_{10} = (3)_{10}$$
$$\downarrow$$
$$(11)_{2}$$

4. Which of the ~~following~~ ~~4~~ ~~bit~~ bit Excess 3 number is equivalent to 5_{10}

$$5 + 3 = (8)_{10}$$

$$(8)_{10} \rightarrow (?)_{2} \rightarrow (1000)_{2}$$

5. Consider the equation $(125)_{5} = (x8)_{y}$ with x and y as unknown. The number of possible solution is

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Converting $(125)_5 \rightarrow (\ )_{10}$

$\downarrow$

$(40)_{10}$

$(40)_{10} = (x8)_y$

$\downarrow$

$(7)_{16}$

$\downarrow$

$(28)_8 \rightarrow$ ①

$(\ )_{32}$

$\downarrow$

$(18)_{32}$ — ②

Ans. 2 solution

6. Convert binary to Hexadecimal

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

$\rightarrow (FF2)_{16}$

7. Octal to decimal $\rightarrow (532.2)_8$

$(532.2)_8$

$5\times8^2 + 3\times8^1 + 2\times8^0 + 2\times8^{-1}$

$320 + 24 + 2 + 0.25$

$\rightarrow (346.25)_{10}$

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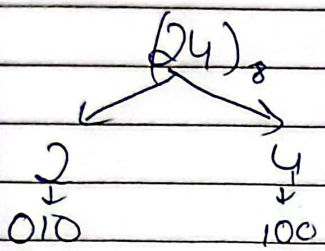
8 The decimal equivalent of octal no $(645)_8$ is $(421)_{10}$

9 The quantity of double word is 4/8 bits

10 Octal to binary $(24)_8$



$\rightarrow (010100)_2$

11 Convert binary to octal

$(110110001010)_2 \rightarrow (?)_8$

$\frac{110}{6} \quad \frac{110}{6} \quad \frac{001}{1} \quad \frac{010}{2}$

$\rightarrow (6612)_8$

12 The octal no. $(651.124)_8$ is equivalent to $(425.1640625)_{10}$

13 Convert Hexadecimal to decimal

$(1E2)_{16}$ $\quad E = 14$

$2 \times 16^0 + 14 \times 16^1 + 1 \times 16^2$

$2 + 224 + 256$

$(482)_{10}$

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14 let r denote number system radix. The only value r that satisfy the equation $\sqrt{121}_r = 11_r$ is/are

The equation is true for any value of $r > 2$