CS-131

Introduction to Information and Communication Technology

Section-K

211370113

BADAR RASHEED BUTT

"Assignment - 4"

Submitted To:-

MAM SHAZMA NOOR

8 letters are damaged.

B:1 letter is lost.

C:- 9 letters are delivered successfully.

0.66x100

Probability = 66./.

 $\frac{4}{12} = 0.33$ 0.33×100

Probability = 33./.

0.75 x 100

Probability = 75./.

Gi.-
$$\frac{3}{12} = 0.25$$
 0.25×100
Probability = 25./.

$$H: 4/12 = 0.33$$
 0.33×100

Probability = 33./.

Probability = 42.1.

Tay diline at

Word "Size" refers to the amount of data a CPU'S internal data registers can hold and process at one time. Modern desktop computers have 64-bit words. Computers embedded in appliances and consumer Products have word sizes of 8, 16 or 32 bits.

K:- Ali asked:-

What does the word "size" means in terms of computer processing?

a:3

Decimal to New Base

Binary:

$$.50x2=1$$

(101000001.1)₂

Octal:

(501.4)8

Hexadecimal:

$$.50 \times 16 = 8$$

(141.8)16

A:4

Old base to Decimal

A. (101001.01)2

$$= 1 \times 2^{5} + \mathbf{o} \times 2^{4} + 1 \times 2^{3} + 0 \times 2^{2} + 0 \times 2^{4} + 1 \times 2^{6} + 0 \times 2^{6} +$$

B. (456.25)8

$$= 4x8^{2} + 5x8^{1} + 6x8^{2} + 2x8^{-1} + 5x8^{2}$$

$$= 256 + 40 + 6 + 0.25 + 0.078$$

$$= (302.328)_{10}$$

C. (C4B.50)16

$$= 12 \times 16^{2} + 4 \times 16^{4} + 11 \times 16^{6} + 5 \times 16^{-1} + 0 \times 16^{-2}$$

$$=(3147.3125)_{10}$$

Heradecimal: =



Binary to new base:

A. (10110·01)2

Octal:-

 $= 1x2^{4} + 0x2^{3} + 1x2^{2} + 1x2 + 0x2 + 0x2 + 0x2 + 1x2^{2}$

= 16 + 0 + 4 + 2 + 0 + 0 + 0.25

 $= (22.5)_{10}$

8 2-6

.25x8 = 2

(26.2)8

B. (10110·01)2

Hexadecimal:-

16 (22

·25 x 16 = 4

(16.4)16

D. (10010.01)2

Hexadecimal:-

$$= 1x2^{4} + 0x2^{3} + 0x2^{2} + 1x2^{1} + 0x2 + 0x2 + 1x2^{-2}$$

$$= 16 + 0 + 0 + 2 + 0 + 0 + 0.25$$

$$=(18.25)10$$

Old base to Binary:

A. (236.632)8

(11101100.1010)2

.632x2=1.264= 1

·264x2= 0.528=0

·528x2 = 1.056 = 1

.056x2 = 0.112 =0

: Inminaherali

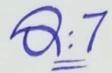
8. (68) (85)

(110011011 - 111011101)2

$$.03 \times 2 = 0.06 = 0$$

 $.06 \times 2 = 0.12 = 0$
 $.12 \times 2 = 0.24 = 0$

(11110.0000)2



Octal to hexadecimal

A: (462.246)8

$$= 4x8^{2} + 6x8^{1} + 2x8^{2} + 2x8^{2} + 4x8^{2} + 6x8^{3}$$

$$= 256 + 48 + 2 + 0.25 + 0.0625 + 0.0117$$

$$= (306.3242)_{10}$$

Hexadecimal:

$$3242 \times 16 = 5.1872 = 5$$

 $1872 \times 16 = 2.9952 = 2$
 $9952 \times 16 = 15.9232 = F$
 $9232 \times 16 = 14.7712 = E$

(132.52 FE)16

$$= 5x8+3x8+1x8+1x8+3x8+5x8^{-3}$$

$$= 320 + 24 + 1 + 0 + 0.125 + 0.047 + 0.0098$$

$$= (345 \cdot 1818)_{10}$$

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Hexadecimal:-

Q:8

Hexadecimal to Octal:

A. (A3B.IC)

$$= 10x16 + 3x16 + 11x16 + 1x16 + 12x16^{-2}$$

$$=(2619 \cdot 1095)10$$

Octal:

 $(5073.0700)_8$

$$1095 \times 8 = 0.876 = 0$$

$$.064x8 = 0.512 = 0$$

B.
$$(4C2.6F)16$$

= $4x16^2+12x16'+2x16+6x16'+15x16'$
= $1024+192+2+0.375+0.058$
= $(1218.433)10$

Octal:-

$$.433x8 = 3.464 = 3$$

 $.464x8 = 3.712 = 3$
 $.712x8 = 5.696 = 5$
 $.696x8 = 5.568 = 5$

 $(2302.3355)_8$

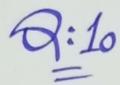
2's Compliment:

d. Bally

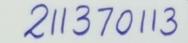
$$(28)_8 = (00011100)_2$$

$$(28)_{10} = (00011100)_2$$

$$(28)_{16} = (00011100)_2$$



$$\begin{array}{c|cccc}
2 & 50 \\
2 & 25 - 0 \\
2 & 12 - 1 \\
2 & 6 - 0 \\
2 & 3 - 0 \\
\hline
1 - 1
\end{array}$$



1-0