

Date: 20-05-2020

Class $\Rightarrow$ 8th
Subject: Computer Science
Note & H.W.

[1]

$\Rightarrow$ BCD [Binary Coded Decimal]:-

BCD (Binary Coded Decimal) is a process for converting decimal numbers into their binary equivalents.

$\Rightarrow$ ASCII [American Standard Code for Information Interchange]:- ASCII codes represent text in computers, communications equipment and other devices that work with text. It is a code for representing English characters as numbers with each letter assigned a number from 0 to 127.

$\Rightarrow$ Gray Code:- The Gray code is a binary numeral system where two successive values differ in by only one digit.

$\Rightarrow$ Conversion of Decimal Number System:-

1- Binary to Decimal:-

$$(1101)_2 = (?)_{10}$$

$$\begin{aligned} & 1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\ & 8 + 4 + 0 + 1 \\ & = (13)_{10} \text{ Ans} \end{aligned}$$

2- Octal N.S. to Decimal N.S.:-

$$(271)_8 = (?)_{10}$$

$$\begin{aligned} & 2 \times 8^2 + 7 \times 8^1 + 1 \times 8^0 \\ & 128 + 56 + 1 \\ & = (185)_{10} \text{ Ans} \end{aligned}$$

Teacher's Sign.

Date
20-05-2020

Class - 8th
Computer Science

[2]

Date

Page

3 ⇒ Hexadecimal N.S. to Decimal N.S. -

$$(2D5C)_{16} = (?)_{10}$$

(A=10, B=11 C=12 D=13
E=14 F=15)

$$2 \times 16^3 + D \times 16^2 + 5 \times 16^1 + C \times 16^0$$

$$2 \times 16^3 + \downarrow 13 \times 16^2 + 5 \times 16^1 + \downarrow 12 \times 16^0$$

$$2 \times 4096 + 13 \times 256 + 80 + 12$$

$$8192 + 728 + 80 + 12$$

$$= (9012)_{10} \text{ Ans.}$$

H.W.

Q.1: Difference between Gray Code and ASCII?

Q.2: Write the acronyms:-

1-ASCII, 2-BCD, 3-MSB, 4-LSB

Q.3: Make a chart showing the different types of conversion of number system. Give example of each conversion.

Q.4: Convert given Number Systems:-

1- $(10011)_2 = (?)_{10}$

2- $(7431)_8 = (?)_{10}$

3- $(ACE5)_{16} = (?)_{10}$

4- $(101010)_2 = (?)_{10}$

5- $(345)_8 = (?)_{10}$

6- $(5349)_{16} = (?)_{10}$