



# Nalanda College – Colombo 10

## Unit Evaluation

Grade 10

Information and Communication Technology

Unit 03

### • Answer All Questions

### • Underline the most suitable answer.

01) Which of the following statements are true?

- A. A bit is the smallest unit of information that a computer can process.
- B. A byte contains 8 bits.
- C. A bit contain 4 nibble.

i) A and B      ii) B and C      iii) A and C      iii) All of them

02) The Decimal equivalent of  $100011_2$  is

i) 34      ii) 35      iii) 49      iii) 36

03) The binary equivalent of decimal  $125_{10}$  is

i)  $1011111_2$       ii)  $1111110_2$       iii)  $1111101_2$       iii)  $11110111_2$

04) Which of the following has least value?

i)  $11100_2$       ii)  $45_8$       iii)  $111_{10}$       iii)  $AF_{16}$

05) Which of the following statements are true?

- A. A Register Memory has less storage capacity than a RAM
- B. A Hard disk has more storage capacity than a Compact disk.
- C. A Cache memory has less storage capacity than a Magnetic Tape.

i) A and B      ii) B and C      iii) A and C      iii) All of them

06) The ASCII code of the character “A” is 65. Which one of the following represents the character “C” in binary?

i)  $1000001_2$       ii)  $1000010_2$       iii)  $1000011_2$       iii)  $1000000_2$

07) If  $1000000_2$  represents A in ASCII, Which of the following is represented by  $1000101_2$ ?

- i) C                      ii) D                      iii) E                      iii) F

08) Which one is the smallest out of the following Binary Coded Decimal (BCD) representations?

- i) 00110110                      ii) 00101000  
iii) 01011000                      iii) 00011001

09) Which is the base value of the number system that consist of the digit set (0,1,2,3,4,5,6) ?

- i) 4                      ii) 5                      iii) 6                      iii) 7

10) What is the MSD and LSD of the  $0.10_2$  respectively?

- i) 0, 1                      ii) 1, 0                      iii) 1, 1                      iii) 0, 0

• Complete the following table.

Number System	Base Value	Number and Alphabetic character used
Binary		
Octal		
Decimal		
Hexa -decimal		

• Do the following calculations and Show your computations.

01) Convert the Binary number 11111111 into the Decimal equivalent.

02) Convert the Binary number 11111111 into the Octal number equivalent.

03) Convert the Binary number 11111111 into the Hexadecimal equivalent.

04) Convert the Decimal number 255 into the Binary equivalent.

05) Convert the Decimal number 255 into the Octal number equivalent.

06) Convert the Decimal number 255 into the Hexadecimal equivalent.

- 07) Convert the Octal number 377 into the Decimal equivalent.
- 08) Convert the Octal number 377 into the Binary number equivalent.
- 09) Convert the Octal number 377 into the Hexadecimal equivalent.
- 10) Convert the Hexadecimal FF into the Decimal equivalent.
- 11) Convert the Hexadecimal FF into the Binary number equivalent.
- 12) Convert the Hexadecimal FF into the Octal number equivalent.

• **Write down the Short answers.**

- 01) How many Bytes are in  $\frac{1}{2}$  MB?
- 02) The Most commonly used standard data code to represent alphabetical, numerical and punctuation characters used in electronic data processing system is called .....
- 03) 3 Kilobytes contain ..... bytes.
- 04) Why we used the Number system?
- 05) Why we used the Coding System?
- 06) Write down the ASCII coded of “Nalanda College” in binary numbers.

• **Filling the blank.**

Binary	Octal	Decimal	Hexa -decimal
<b>110101001</b>		<b>425</b>	
	<b>123</b>		<b>83</b>
		<b>2748</b>	<b>ABC</b>
<b>11001110</b>			
	<b>345</b>		