

**SAINIK SCHOOL GOPALGANJ**  
**SUB: COMPUTER SCIENCE**  
**CLASS – XI**

**ASSIGNMENT - 2**

**Data Representation**

**A. (Q1 to Q10) There are four options against each question. Choose the option which you consider the most appropriate as your answer.**

- 1 The Binary of  $(13)_{10}$  is \_\_\_\_\_.  
a) 1101                      b) 1111                      c) 1000                      d) 1100
- 2 The hexadecimal of  $(423)_{10}$  is  
a) 1A7                      b) 1A8                      c) 2A8                      d) 2AA
- 3 The binary system,  $1+1=$ .....  
(a) 2                      (b) 0                      (c) 1                      (d) 0 carry 1
- 4  $(110)_2 + (110)_2 = (\text{.....})_{10}$   
(a) 6                      (b) 8                      (c) 10                      (d) none of these
- 5 The digital system usually operated on .....system.  
(a) binary                      (b) decimal                      (c) octal                      (d) hexadecimal
- 6 The binary system use powers of.....for positional values.  
(a) 2                      (b) 10                      (c) 8                      (d) 16
- 7 After counting 0, 1, 10, 11, the next binary number is  
(a) 12                      (b) 100                      (c) 101                      (d) 110
8. The 1's complement of  $(1000)_2$  is  
(a) 0111                      (b) 0101                      (c) 1000                      (d) 0001
9.  $(11010011)_2 = (?)_{16}$   
(a) D316                      (b) A316                      (c) B316                      (d) D216
- 10  $(A)_{16} = (\text{_____})_2$   
a) 1010                      b) 1100                      c) 11000                      d) 10101

**B. Short Answer Questions:**

1. What is ASCII Code?
2. What is the significance of Unicode?
3. Discuss UTF encoding scheme?
4. What is the utility of ISCII encoding scheme?
5. What is the use of encoding scheme?

**C. Long Answer Questions:**

1. Explain octal and hexadecimal number.
2. Explain decimal and binary number.
3. Do as directed :
  - a) Convert the Decimal number 781 to its Binary equivalent.
  - b) Convert Binary number 101101.001 to its decimal equivalent.
  - c) Convert Octal number 321.7 into its Binary equivalent.
4. Do as directed :
  - a) Convert the Hexadecimal number 3BC into its Binary equivalent
  - b) Convert the Binary number 10011010.010101 to its Hexadecimal equivalent.
  - c) Convert the Decimal number 345 into Octal number.
5. Do as directed
  - a) Convert the Decimal number 736 into Hexadecimal number.
  - b) Convert the Octal number 246.45 into Hexadecimal number.
  - c) Convert the Hexadecimal number ABF.C into Octal number.
  - d) Convert the Octal number 576 to Decimal.
  - e) Convert the Hexadecimal number A5C1 to Decimal.

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