C.W
30/4/22

SECTION-A

A- Fill in the blanks.

1- The base of Binary number system is 2.
2- The base of decimal number system is 10.
3- Octal number system consists of 8 digits.
4- In Binary addition, 1+1 equals to 10.
5- Binary number system is understood by the computer system.
6- Hexadecimal uses 16 symbols to represent numbers.
7- In Binary subtraction, 1 - 1 equals to 0.

0, Binary, Decimal Number, Hexadecimal, 2, 8, 10

B- State True or false :-

① You cannot perform arithmetical operations on binary numbers. F
② The decimal number system consists of 10 digits i.e., 0 to 9. T
③ The method to perform division of two binary numbers is not the same as that of decimal numbers. F
④ 1 multiplied by 0 equals to 0. T
⑤ Charles Babbage introduced the concept of 0 (zero). F
⑥ The numbers used in Octal Number System are 1 to 7. F

SECTION-B

A- Multiple-choice questions.

1- Aryabhat introduced the concept of 0 (zero).

(a) Ada Lovelace

(b) Aryabhat

(c) Bill Gates.

2- A Digital Computer converts the decimal format into its binary equivalent.

(a) Digital Computer

(b) Cell Phone

(c) Abacus.

3- A computer understands only Binary Code.

(a) English

(b) French

(c) Binary

4- In Binary multiplication, 1×1 equals to 1.

(a) 0

(b) 1

(c) 2

5- To convert Decimal number into Binary number, divide the number by 2.

(a) 2

(b) 8

(c) 10

B- Answer The Following Questions.

1- What is a number system? Name the different types of number system used.

Ans- The earlier methods used for counting numbers were not adequate and had many limitations. To overcome these limitations, number system was introduced. The number system is a set of values used to represent different quantities.

Types of number system are-

- Decimal Number System
- Binary Number System
- Octal Number System
- Hexadecimal Number System.

2- What are the rules to convert a Decimal number into a Binary Number?

Ans- Rules to convert decimal number into binary number are:

- Step 1: Divide the given decimal number with base 2.
- Step 2: Write down the remainder and divide the quotient again by 2.
- Step 3: Repeat the step 2 till the quotient is zero.

3. Write the rules to multiply two Binary numbers.

Ans- The rules for performing multiplication using Binary numbers is same as that of the decimal numbers.

a	b	a * b = c
0	0	0 * 0 = 0
0	1	0 * 1 = 0
1	0	1 * 0 = 0
1	1	1 * 1 = 1

4. Briefly explain the Octal Number system.

Ans- The concept of Octal number system came from the Native American. The Octal number system consists of 8 digits: 0 to 7 with base 8.

5. What do you understand by Hexadecimal Number System?

Ans- The Hexadecimal number system is also known as Hex, consists of 16 digits: 0-9 and the letter A-F represents digits 10 to 15 with the base 16.