CLASS	SUBJECT	TOPIC / CHAPTER	MODULE / ASSIGNMENT	REFERENCE LINKS
VII	COMPUTER	**Ch – 2 : Number System- An Introduction**	**Q1. Fill in the blanks:** i. _____of a number system is the total number of digits available in the number system. **ii.** The base of Binary number system is __. **iii.** The base of _____ number system is 16. **iv.** Digits from 0-9 are used in _____number system. **v.** Digits from 0-7 are used in _____ number system. **Q1. ANSWER** **i.** <u>Base</u> **ii.** <u>2</u>. **iii.** <u>hexadecimal</u>. **iv.** <u>decimal</u>number v. <u>octal</u> **Q2. State True or False:** i.The decimal number 2 is represented in binary as 10. ii. The octal number system consist of digits 1-7. iii. The hexadecimal number system consists of numbers from 0-9, letters A-F iv. Number system conversion is required to communicate for different levels of computer system. v.Binary number with four digits has a maximum value of 15. **Q2. State True or False:** i. True ii. False iii. True iv. True v. True	

Q3. Answer the following questions:
1. What is Number System?
2. What are the different types of Number System? Explain briefly.

Q3. Answer the following questions:

1. Number System is a set of values used to represent different quantities.
2. Ans. There are four types of Number System –
   a) Decimal Number System- consists of digits from 0-9 and base is 10.
   b) Binary Number System- consists of digits 0,1 and base is 2.
   c) Octal Number System- consists of digits from 0-7 and base is 8.
   d) Hexadecimal Number System- consists of digits from 0-9, A-F where A=10, B=11, C=12, D=13, E=14, F=15 and base is 16.

Q4. Convert the following numbers from Binary to Decimal.

i.$(1101)_2 = (13)_{10}$
ii.$(11010)_2 = (26)_{10}$
Solve the Q 5. d.

Q4. ANSWER

i.$(1101)_2 = (13)_{10}$

$1101 = 1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0$
$= 8 + 4 + 0 + 1$
$= 13$

ii.$(11010)_2 = (26)_{10}$

$11010 = 1 \times 2^4 + 1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 0 \times 2^0$
$= 16 + 8 + 0 + 2 + 0$
$= 26$

Solve the Q 5. d.

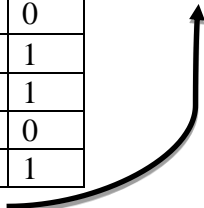**Q5. Convert the following numbers from Decimal to Binary.**

i.$(54)_{10} = (110110)_2$
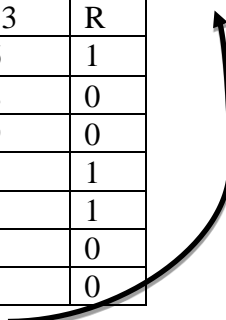ii. $(153)_{10} = (10011001)_2$

Solve the Q 5. e.

Q5. ANSWER

i.$(54)_{10} = (110110)_2$

2	54	R
2	27	0
2	13	1
2	6	1
2	3	0
	1	1

ii. $(153)_{10} = (10011001)_2$

2	153	R
2	76	1
2	38	0
2	19	0
2	9	1
2	4	1
2	2	0
	1	0

Solve the Q 5. e.

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