



Rudra The Practical School
Worksheet – 1 (Lesson 1)
Sub – Computer

Name: T.C.
Class: 7th

Date -
Div :

Q1) Fill in the Blanks.

1. The binary number system uses only two digits: 0 and 1.
2. The base of the decimal number system is 10.
3. The hexadecimal number system includes the digits 0-9 and the letters A-F.
4. The number of unique digits in the octal number system is 8.
5. In the binary number system, the weight of the rightmost digit is always 1.
6. To convert a decimal number to binary, divide the number by 2 repeatedly.
7. Each position in a number system has a weight which is a power of its base.

Q2) True or False.

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| 1. The decimal number system is also called the base-8 number system. | <u>False</u> |
| 2. The binary system is widely used in digital computers. | <u>True</u> |
| 3. The value of a digit in any number does not depend on its position. | <u>False</u> |
| 4. 5 is a valid digit in the binary number system. | <u>False</u> |
| 5. The base of the hexadecimal number system is 16. | <u>True</u> |
| 6. Aryabhata introduced the concept of zero. | <u>True</u> |
| 7. The octal number system uses digits from 0 to 9. | <u>False</u> |

Q3) Answer in One Word.

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| 1. What is the base of the binary number system? | <u>2</u> |
| 2. How many unique digits are there in the decimal system? | <u>10</u> |
| 3. What number system is used by computers? | <u>Binary</u> |
| 4. What is the least significant digit in a number called? | <u>LSB</u> |
| 5. What is the highest digit in the octal number system? | <u>7</u> |
| 6. What is the base of the hexadecimal system? | <u>16</u> |
| 7. What is the place value of the digit at position 3 in the decimal system? | <u>100</u> |

Q4) Multiple Choice Questions (MCQs)

1. Which of the following is not a valid digit in the octal number system?

a) 7 b) 8

c) 5

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2. The base of the binary number system is:

- a) 10 ☒ b) 2 c) 8 d) 16

3. What is the base of the hexadecimal number system?

- a) 8 b) 10 c) 12 ☒ d) 16

4. In the number 685, what is the place value of digit 6 in the decimal system?

- a) 6 b) 60 ☒ c) 600 d) 6000

5. Which digit always has the weight 0 in place value?

- a) Middle digit b) Leftmost digit c) Rightmost digit ☒ d) None

Q5) One Line Answers.

1. Which number system uses both digits and letters?

Ans - Hexadecimal number system uses both digits & letters.

2. How many symbols are used in the binary system?

Ans - 2 symbols are used in the binary system.

3. What is the value of 2^4 in binary place value?

Ans - The value of 2^4 in binary place value is 16.

4. What method is used to convert decimal to binary?

Ans - The method used to convert decimal to binary is repeated division by 2.

5. Name the Indian mathematician who introduced zero.

Ans - Aryabhatta

Q6) Solve the following.

- 1) $10111 + 11$ 2) $11101 - 10$ 3) $10101 \div 10$ 4) $101111 * 111$

Q7) Convert following into binary number system.

- 1) $(6C616)_{16}$ 2) $(139)_{10}$ 3) $(41)_8$ 4) 100001