

QUESTION BANK

CHAPTER 1

NUMBER SYSTEM

Q1. Multiple Choice Questions:

1. Which number system uses only the digits 0 and 1?

A) Decimal

B) Octal

C) Binary

D) Hexadecimal

Answer: C) Binary

2. The binary number system has a base of:

A) 8

B) 10

C) 16

D) 2

Answer: D) 2

3. How many symbols are used in the decimal number system?

A) 2

B) 8

C) 10

D) 16

Answer: C) 10

4. Which of the following is a binary digit (bit)?

A) 5

B) 9

C) 1

D) A

Answer: C) 1

5. The octal number system uses how many symbols?

- A) 2
- B) 8
- C) 10
- D) 16

Answer: B) 8

6. Which number system uses the symbols 0–9 and A–F?

- A) Binary
- B) Decimal
- C) Octal
- D) Hexadecimal

Answer: D) Hexadecimal

7. The decimal number system has a base of:

- A) 2
- B) 8
- C) 10
- D) 16

Answer: C) 10

8. In a binary number, each digit represents a power of:

- A) 2
- B) 8
- C) 10
- D) 16

Answer: A) 2

9. Computers store and process data mainly using which number system?

- A) Decimal
- B) Binary
- C) Octal
- D) Hexadecimal

Answer: B) Binary

10. What is the radix of the hexadecimal number system?

A) 2

B) 8

C) 10

D) 16

Answer: D) 16

Q2. Fill in the Blanks:

1. All digital computers use a special code called ____ code.

Answer: Binary

2. Binary code uses only two digits: ____ and ____.

Answer: 0 and 1

3. Binary digits are also called ____.

Answer: Bits

4. The binary number system has a base of ____.

Answer: 2

5. The decimal number system has a base of ____.

Answer: 10

6. The octal number system uses ____ digits.

Answer: 8

7. The hexadecimal number system has a base of ____.

Answer: 16

8. In hexadecimal, the letter A represents the value ____.

Answer: 10

9. Conversions are the process of changing numbers from one ____ to another.

Answer: System

10. In the binary system, each digit represents a power of ____.

Answer: 2

Q3. State whether the following are True or False:

1. Binary code uses the digits 0 and 1.

Answer: True

2. Decimal numbers have a base of 8.

Answer: False

3. Computers store data using the binary number system.

Answer: True

4. Octal numbers use digits from 0 to 7.

Answer: True

5. Hexadecimal numbers use 20 symbols.

Answer: False

6. In hexadecimal, F represents 15.

Answer: True

7. A number system is used to represent numbers and characters.

Answer: True

8. Binary digits are called bytes.

Answer: False

9. The decimal number system uses ten digits.

Answer: True

10. Conversion means changing numbers from one number system to another.

Answer: True

Q4. Answer in One Word

1. What is the base of the binary number system?

Answer: 2

2. What is the base of the decimal number system?

Answer: 10

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

Answer: 8

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

Answer: 16

5. What are binary digits called?

Answer: Bits

6. Which number system uses digits 0–7?

Answer: Octal

7. Which number system uses digits 0–9 and A–F?

Answer: Hexadecimal

8. What does the letter A represent in hexadecimal?

Answer: 10

9. What is the process of changing a number from one system to another called?

Answer: Conversion

10. Which number system is used by computers to store data?

Answer: Binary

Q5. Competency-Based Questions

1. A computer stores all data using only two digits. Which number system does it use and why?

Answer: The computer uses the Binary Number System because it uses only two digits, 0 and 1, which represent the OFF and ON states of electronic circuits.

2. Riya sees the number $(235)_8$ in her textbook. How can she identify that it belongs to the Octal Number System?

Answer: The subscript 8 indicates that the number belongs to the Octal Number System, which uses digits from 0 to 7.

3. A programmer writes the value $(BEF)_{16}$. Which number system is being used, and what is special about it?

Answer: The Hexadecimal Number System is being used. It is special because it uses 16 symbols: 0–9 and A–F.

4. While converting a decimal number to binary, Aman gets the remainders 1, 0, 1, 1 from top to bottom. In which order should he write them to get the binary equivalent?

Answer: He should write the remainders in reverse order (bottom to top). Therefore, the binary number will be 1101_2 .

5. A student finds the number $(10101)_2$ and wants to know its decimal value. Which conversion method should be used?

Answer: The Binary to Decimal Conversion method should be used by multiplying each digit by its positional value (powers of 2) and adding the results.

$$(10101)_2 = (21)_{10}.$$

CHAPTER 2

FILTERS AND WHAT-IF TOOLS

Q1. Multiple Choice Questions:

1. Which filter is the simplest type of filter in Excel?

- A) Advanced Filter**
- B) Standard Filter**
- C) Custom Filter**
- D) Text Filter**

Answer: B) Standard Filter

2. Which tab contains the Sort & Filter option?

- A) Insert**
- B) Data**
- C) Home**
- D) View**

Answer: C) Home

3. What appears next to each column header after applying a filter?

- A) Check box**
- B) Drop-down arrow**
- C) Formula bar**
- D) Scroll bar**

Answer: B) Drop-down arrow

4. Number Filter is mainly used for:

- A) Images
- B) Text only
- C) Numeric values
- D) Charts

Answer: C) Numeric values

5. Which command removes the last applied filter?

- A) Delete
- B) Undo
- C) Clear
- D) Remove

Answer: C) Clear

6. Sorting data helps to:

- A) Delete data
- B) Organize data
- C) Hide data
- D) Print data

Answer: B) Organize data

7. Goal Seek is found under:

- A) Insert
- B) Home
- C) What-If Analysis
- D) Review

Answer: C) What-If Analysis

8. Goal Seek works by changing:

- A) Formula cell
- B) Input cell
- C) Worksheet
- D) Chart

Answer: B) Input cell

9. Which sorting option arranges values in descending order?

A) Smallest to Largest

B) Largest to Smallest

C) A to Z

D) Custom Sort

Answer: B) Largest to Smallest

10. In the Goal Seek example, the monthly saving required to save ₹1600 in 4 months is:

A) ₹300

B) ₹350

C) ₹400

D) ₹500

Answer: C) ₹400

Q2. Fill in the Blanks:

1. Excel is widely used for data _____.

Answer: analysis

2. Filters display specific data based on _____.

Answer: conditions

3. The simplest kind of filter is the _____ Filter.

Answer: Standard

4. Number Filter works on _____ values.

Answer: numeric

5. To apply a filter, first select the data _____.

Answer: range

6. Small _____ arrows appear next to column headers after filtering.

Answer: drop-down

7. Sorting data can be done alphabetically, numerically, or by _____.

Answer: date

8. Goal Seek helps find the required _____ value.

Answer: input

9. Goal Seek is available under ____ Analysis.

Answer: What-If

10. In the example, the savings goal was increased to ₹____.

Answer: 1600

Q3. State whether the following statements are True or False:

1. Filters help display only selected data.

Answer: True

2. Number Filter can be used on text values only.

Answer: False

3. The Clear command removes an applied filter.

Answer: True

4. Sorting always deletes data.

Answer: False

5. Data can be sorted by date.

Answer: True

6. Goal Seek works backward from the desired result.

Answer: True

7. Goal Seek requires three inputs.

Answer: True

8. Custom Sort can sort based on different columns.

Answer: True

9. Standard Filter is more complex than Number Filter.

Answer: False

10. Goal Seek is used for solving "what-if" problems.

Answer: True

Q4. Answer in One Word

1. Which filter is used for numeric data?

Answer: Number Filter

2. Which tab contains Sort & Filter?

Answer: Home

3. What appears beside column headings when filtering?

Answer: Arrow

4. Which command removes filters?

Answer: Clear

5. What process arranges data in order?

Answer: Sorting

6. Which tool helps achieve a desired result by changing an input value?

Answer: GoalSeek

7. Which analysis feature contains Goal Seek?

Answer: What If Analysis

8. Which order arranges numbers from low to high?

Answer: Ascending

9. What is the desired result in Goal Seek called?

Answer: Target

10. Which cell was changed in the Goal Seek example?

Answer: B4

Q5. Competency-Based Questions with Answers

1. A teacher wants to see only students who scored above 80 marks in a spreadsheet. Which Excel feature should be used?

Answer: The teacher should use Number Filter and set the condition to display values greater than 80.

2. A shopkeeper has a list of products and wants to view only unpaid orders. What should he do?

Answer: Apply a Standard Filter on the Status column and select only Unpaid.

3. A company wants to arrange employee records from highest salary to lowest salary. Which feature should be used?

Answer: Use the Sort Largest to Smallest option.

4. Riya saves ₹300 per month for 4 months and gets ₹1200. She wants to save ₹1600 in the same period. Which Excel tool can help her find the required monthly savings?

Answer: Goal Seek can calculate the required monthly savings amount.

5. A student accidentally sorted only one column instead of the entire table. What problem may occur?

Answer: The data may become mismatched because related information in other columns will not move along with the sorted column.