Chapter 1 – Introduction with Computers and Programming Languages

Short Questions with Easy Answers

Q1. What is computer program?

👉 A computer program is a set of **instructions** given to the computer to solve a problem.

- Example: A program that calculates student marks and shows total result.

Q2. What is programming language?

👉 A programming language is a way to **communicate with the computer**.

- Example: If you want to add two numbers in C language:

```
sum = a + b;
```

Q3. List types of programming languages.

👉 Two types:

1. **Low-level languages** (close to computer)
2. **High-level languages** (close to human)

Q4. What is high-level language?

👉 A language that looks like **English** and is easy for humans to understand.

- Example:

```
print("Hello World");
```

Q5. What is low-level language?

👉 A language that is close to **computer hardware**. Two types:

1. **Machine language**
2. **Assembly language**

Q6. What is machine language?

👉 Computer's **native language**, made of 0s and 1s (binary).

- Example: 10101010 (instruction for computer).

Q7. What is assembly language?

👉 Uses **short English-like words** (mnemonics) instead of 0s and 1s.

- Example:

```
MOV A, 5   ; move 5 into register A
ADD A, B   ; add A and B
```

Q8. List some high-level languages.

👉 Examples:

- C, C++, C#
- COBOL, BASIC, FORTRAN
- Pascal, Java

Q9. What is EDP (Electronic Data Processing)?

👉 Using **computers** for fast and accurate data processing like recording, sorting, and summarizing.

- Example: Banks use EDP for customer account records.

Q10. Who is a programmer?

👉 A person who **designs, writes, and tests** programs.

- Example: Someone writing a payroll program for a company.

✅ **Long Questions (Easy Style with Examples)**

Q1. Define Computer Development.

- Computers evolved in **generations**:
  - 1st Gen: Vacuum tubes (slow, big, 1940s).
  - 2nd Gen: Transistors (faster, smaller).
  - 3rd Gen: Integrated Circuits (ICs).
  - 4th Gen: Microprocessors.
  - 5th Gen: AI, supercomputers.
    👉 Example: Today's mobile phones are **5th generation computers**.

Q2. Describe Electronic Data Processing (EDP).

- **Definition**: Automatic data handling by computers.
- **Steps**: Input → Processing → Output.
- **Features**: Fast, accurate, reliable.
  👉 Example: Railway reservation systems use EDP to manage ticket booking.

Q3. Features of Programming Languages.

1. **Simplicity** – Easy to understand.
2. **Portability** – Same program runs on different computers.
3. **Efficiency** – Uses less memory and runs fast.
4. **Error handling** – Helps find mistakes.
   👉 Example: Java is portable (runs on Windows, Mac, Linux).

Q4. Categories of Programming Languages.

1. **Low-level languages**

- Machine Language (binary)
- Assembly Language (mnemonics)

2. **High-level languages**
   - Easy, English-like (C, Java, Python).
     👉 Example:

- Low-level: 101010
- High-level: print("Hello")

Q5. Advantages of EDP.

1. **Speed** – Processes data very fast.
2. **Accuracy** – Fewer mistakes.
3. **Storage** – Large amount of data can be stored.
4. **Cost-saving** – Reduces manpower.
   👉 Example: Schools use EDP to **automatically calculate students' results**.