Multiple Choice Questions:

1. Which of the following best describes programming?

a) The process of repairing computer hardware.

Ans: b) Creating a set of instructions for a computer to perform a task.

c) The act of playing computer games.

d) Designing computer hardware.

2. What does IDLE stand for in Python development?

Ans: a) Integrated Development and Learning Environment.

b) Integrated Digital Learning Experience.

c) Interactive Development and Learning Environment.

d) Independent Development and Learning Entity.

Fill in the Blank:

3. In programming, the process of finding and fixing errors or 'bugs' in the code is known as debugging.

4. Python is a dynamically typed language, meaning you don't need to declare the type of

a variable beforehand.

True/False:

5. True or False: Low-Level programming languages are closer to the binary code that

computers understand and are more complex for humans to read and write.

True

Match the Columns:

Match the following programming concepts with their analogies:

6.

A B

a) Planning the Program - 1) Similar to deciding the number of

rooms and layout in a house.

b) Choosing Programming Language - 2) Comparable to choosing between

bricks, wood, or concrete for building.

c) Debugging and Testing - 3) Like inspecting the plumbing,

electrical system, and structure for issues.

7. Explain the analogy between programming and building a house in your own

words.

Ans: There are 5 stages of building and programming and which are symbolic to each other planning is required of house similarly plan we needs to setup for code block, after planning selecting material is required in house construction similarly HTML,CSS & Javascript etc is also required. Construction is there in house construction but in programming coding required. Like inspecting in house the plumbing, electrical system, and structure for issues. Bug fixing and checking errors and solving those called testing and debugging is known in programming. Last step is checking for up grade in code as renovation in house.

8. Describe the differences between a Compiler and an Interpreter in programming.

Ans: Compiler 1. (C, C++) 2. (Machine code conversion before execution) 3.(fast execution) 4. (execution is different and compilation is different) and Interpreters 1.(Python, Ruby) 2.(step by step execution) 3.(slow execution)used

9. What are the key differences between High-Level and Low-Level programming

languages? Give examples of each.

High Level: Programmer friendly, Require compiler and interpreter, portable ex: java, Python

Low Level: Machine language, defined CPU required ex: assembly language

10. What are the main features of an Integrated Development Environment (IDE)? Why

are they important for programmers?

Integrated Development Environments (IDEs) provide comprehensive tools and features to facilitate software development. IDE is used for syntax highlighting, code completion, and formatting for efficient coding. Includes tools for compiling, building, and running code, streamlining the development process. Offers capabilities for setting breakpoints, inspecting variables, and stepping through code to identify and fix bugs. Integrates with version control systems like Git for managing code repositories and collaborating with team members. Provides features for organizing and managing projects, facilitating file navigation and project-wide searches.

11. Explain the characteristics of Python as a programming language. Why is it

considered a high-level language?

Python is High level because of the following features and same are its characteristics:

1. Support OOP concepts
2. Dynamically typed
3. Interpreted
4. **Rich Standard Library**
5. **Cross-Platform Compatibility**
6. **Extensibility**

12. Use print function to display your name

Ans: Print(“Rajan”)