

SHAKUNATALA KRISHANA INSTITUTE OF TECHNOLOGY (KD64)

BCA – 1st Semester

Subject: Computer Application

Assignment Questions

1. What is a computer? Explain its components and architecture.
2. Define algorithm. What are the characteristics of a good algorithm?
3. What is a flowchart? Draw symbols used in flowcharts.
4. Explain the difference between an algorithm and a flowchart with examples.
5. Convert the decimal number 125 into binary, octal, and hexadecimal systems.
6. Convert $(110101)_2$ to decimal and hexadecimal.
7. What is the number system? Explain different types of number systems.
8. What is binary addition and subtraction? Explain with examples.
9. What is a programming language? Differentiate between low-level and high-level languages.
10. Explain the process of compiling and interpreting a program.
11. What are the features and applications of C language?
12. Write and explain a simple C program to find the sum of two numbers.
13. Explain different types of operators in C programming language.
14. What are variables and constants in programming? Explain with examples.
15. Write a short note on decision-making statements in C (if, if-else, switch).
16. Explain the use of loops in programming. Write examples of while and for loops.
17. What is pseudocode? Write pseudocode for finding the largest number among three.
18. What is problem-solving? Explain the steps in the problem-solving process.
19. What is a flowchart? Create a flowchart to find the factorial of a number.
20. Write and explain an algorithm to check whether a number is even or odd.
21. Explain the concept of debugging and its importance in programming.
22. What is modular programming? Explain its advantages.
23. What is the difference between compiler, interpreter, and assembler?
24. Explain the role of operating systems in program execution.

25. What is data type? Explain basic data types used in C language.
26. What is syntax error, logical error, and runtime error? Give examples.
27. Explain the structure of a C program with an example.
28. Write and explain an algorithm and flowchart to calculate the area of a circle.
29. Explain the concept of problem analysis and algorithm design.
30. Discuss how computers are used for problem-solving in business and education.

Instructions:

- Attempt all questions in your own handwriting.
- Use neat diagrams, algorithms, and flowcharts wherever necessary.
- Submit within the given deadline.