2024/FYUG/EVEN/SEM/
CSCIDC–151T/065

FYUG Even Semester Exam., 2024

COMPUTER SCIENCE

(2nd Semester)

Course No. : CSCIDC–151T

(Programming Fundamentals with C)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *twenty* questions : 1×20=20

1. What is high-level programming language?

2. What is assembler?

3. Define source code.

4. What is debugging?

5. What is the output of the compilation process?

6. Define algorithm.

7. Name some common symbols used in flowcharting.

8. What are the rules for designing a flowchart?

9. Who developed the C programming language?

10. What is the role of the compiler and linker in the execution of a C program?

11. What is token in C?

12. What is keyword?

13. What is symbolic constant?

14. What is literal?

15. What is a variable and how is it declared?

16. What is the purpose of decision-making in C programming?

17. Write the syntax of the 'if-else' statement in C.

18. What is 'break' statement in C?

19. Write the syntax of the 'for' statement in C.

20. What does the 'continue' statements do in a loop in C?

21. What is an array?

22. What is the purpose of a 'return' statement in a function?

23. What is function declaration?

24. What is function call?

25. Define pointer.

SECTION—B

Answer any *five* questions : 2×5=10

26. Differentiate between compiler and interpreter.

27. Differentiate between high-level and machine-level programming languages.

28. What are the qualities of a good algorithm?

29. Draw a flowchart to find the largest among two different numbers entered by the user.

30. What is an identifier? Write the basic rules for naming an identifier.

31. Explain the difference between pre-increment and post-increment operators in C.

32. What is 'nested if-else' statement in C?

33. Differentiate between 'while' and 'do-while' statements.

34. What are standard library functions in C? Give examples.

35. How do you declare and initialize one-dimensional array? Give example.

SECTION—C

Answer any *five* questions : 8×5=40

36. What is error in computer program? Explain different types of error with suitable examples. 3+5=8

37. What is testing? Explain some common types of testing techniques used in the software development process. 3+5=8

38. Differentiate between algorithm and flowchart. Write an algorithm to find the area of a rectangle. 4+4=8

39. *(a)* What are the basic structures of a C program? 4

(b) Write a C program to calculate simple interest. 4

40. What are data types in C? Explain them with suitable examples. 3+5=8

41. What is operator? Explain the various operators used in C programming. 2+6=8

42. What is 'switch' statement in C? Write the syntax and illustrate with a suitable example. 3+5=8

43. Explain the importance of loop in C. Write a C program using 'for' loop to find sum of natural numbers between 1 to *n*. 3+5=8

44. Differentiate between function prototype and function definition. Write a C program to find the sum of two numbers using a function. 4+4=8

45. What are the importances of function in C programming? What is recursion? Give suitable example to illustrate recursion. 2+2+4=8

★ ★ ★