

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Second Semester B.Sc Computer Science Degree Examination, April 2023

BCS2B02 – Problem Solving Using C Language

(2022 Admission onwards)

Time: 2 hours

Max. Marks : 60

**PART A****Questions 1 to 12. Each question carries two marks. Ceiling 20 marks.**

1. What is data type? List any four data types in C.
2. Define macro function in C
3. What is recursion?
4. Define pointers in C.
5. Differentiate scope and lifetime of a variable.
6. What is Bit field?
7. Explain pre-processor directives.
8. What is pointer expression? Give example.
9. What are command line arguments in C?
10. Write the syntax of a function prototype.
11. Explain the conditional operator.
12. Write a C program to check the given number is even or odd.

**PART B****Questions 13 to 19. Each question carries five marks. Ceiling 30 marks.**

13. Write a note on dynamic memory allocation in C program.
14. What is an array? Explain different types of arrays with example.
15. Write a C program to read  $n$  number of values in an array and display them in reverse order.
16. Differentiate Structure and Union.
17. List and explain different file manipulation functions in C.
18. Briefly explain different jump statements in C.
19. Write a C program to check whether a character is an alphabet, digit or special character.

### **PART C**

**Questions 20 to 21. Answer any one question. Each question carries ten marks.**

20. What are the different categories of functions in C Programming? Explain with example.

21. Explain different looping statement in C language with suitable example.

**(1x10=10 Marks)**