



DCU-003-1031002

Seat No. _____

B. C. A. (Sem. I) (CBCS) (W.E.F. 2016) Examination

August - 2022

**Problem Solving Methodology &
Programming in C : CS-02**

Faculty Code : 003

Subject Code : 1031002

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instruction : Attempt any five questions.

- 1 (a) Attempt the following objective Question L 4
- (1) How many keywords available in C?
 - (2) How many arithmetic operators available in C?
 - (3) Who invented C language?
 - (4) The _____ provides pictorial representation of given problem.
- (b) What is Constants? 2
- (c) What is Type casting? Explain with Example. 3
- (d) Explain Dry-run and its Use with suitable example. 5
- 2 (a) Attempt the following objective question : 4
- (1) _____ is a procedure or step by step process for solving a problem.
 - (2) The _____ symbol is used to represent decision in flowchart.
 - (3) What does an arrow represent in a flow chart?
 - (4) C Language developed at _____?
- (b) What is identifier? 2
- (c) Difference between traditional and modern C? 3
- (d) Explain the basic structure of a C Program in detail. 5

- 3 (a) Attempt the following objective question : 4
- (1) How many loops available in C?
 - (2) Name the loop that executes at least once?
 - (3) While loop is a which type of loop _____?
 - (4) A loop containing another loop in its loop its body is called _____.
- (b) What is Break statement? 2
- (c) Write a C program to calculate the sum of first n natural numbers. 3
- (d) Write any simple C program which contain nested loop. 5
- 4 (a) Attempt the following objective question : 4
- (1) Do while loop is which type of loop _____
 - (2) One IF statement can have multiple _____?
 - (3) What is break statement in C?
 - (4) 'What is Continue statement?
- (b) What is Conditional ternary operator? 2
- (c) Explain control structure with example. 3
- (d) Explain types of loop in detail with example. 5
- 5 (a) Attempt the following objective question : 4
- (1) What is the use of Strcpy() ?
 - (2) What is the use of floor()?
 - (3) What is the use of getchar()?
 - (4) What is the use of tolower()?
- (b) What is Function call by reference ? 2
- (c) What is Recursion ? Explain with suitable example. 3
- (d) Explain types of user defined functions with suitable example. 5

- 6 (a) Attempt the following objective question 4
- (1) What is the use of malloc()?
 - (2) What is the use of rand()?
 - (3) What is the use of clock()?
 - (4) What is the use of isalpha()?
- (b) What is Pointers? 2
- (c) Explain Storage classes in detail. 3
- (d) Explain Passing and returning values with suitable example. 5
- 7 (a) Attempt the following objective question : 4
- (1) Array index starting form _____?
 - (2) Which symbol is used to declare an array variable?
 - (3) Which keyword is used to create a structure_____?
 - (4) Array is a _____ data. structure.
- (b) What is structure? 2
- (c) Difference between Structure & Union. 3
- (d) Explain Nested structures with suitable example. 5
- 8 (a) Attempt the following objective question : 4
- (1) Which data type holds Array index?
 - (2) 2-D array is a collection of _____.
 - (3) Which operator use for access pointer to structure?
 - (4) Maximum number of elements in the array declaration int a[5] [8] is _____
- (b) What is a String array? 2
- (c) Explain Types of arrays with suitable example. 3
- (d) Explain Arrays and Matrices with suitable example. 5

- 9** (a) Attempt the following objective question : **4**
- (1) What is the use of fopen()?
 - (2) What is the use of rename()?
 - (3) What is the use of fscanf()?
 - (4) What is the use of fseek()?
- (b) What is File Handling? **2**
- (c) What is I/O Operations? Explain in detail. **3**
- (d) Explain Command line arguments with suitable example. **5**
- 10** (a) Attempt the following objective question : **4**
- (1) A pointer that is pointing to nothing is called _____.
 - (2) Which operator is used to declare the pointer variable?
 - (3) Which operator is known as address of operator?
 - (4) What is meaning of pointer to pointer?
- (b) What is the use of pointers in Dynamic Programming? **2**
- (c) What is Pointer within Array? Explain in detail. **3**
- (d) Explain Pointers within structure with suitable example. **5**
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