

ITM (SLS) BARODA UNIVERSITY
SCHOOL OF COMPUTER SCIENCE, ENGINEERING AND TECHNOLOGY (SOCSET)
Question Bank

SEMESTER: II
COURSE-CODE: C2210C1
COURSE-NAME: Programming in C

What is a compiler interpreter?

What is algorithm?

What is a flow chart?

What is machine level, assembly level and programming language?

Explain basic data types of C.

Explain Derived data types.

Discuss the importance of the stdio.h header file.

Explain different types of operators used in c language with their precedence and associativity.

What do you mean by type conversion? Why is it necessary?

What is the difference between keywords and identifiers? Explain rules for naming an identifier.

Explain various Operators used in C language.

List all operators used in C and explain any three with examples.

List the header files used in c Programming with their properties.

What are header files? Name at least 3 with its usage

Define variable and constant. Explain different types of constants.

What is type conversion? List and explain type conversion supported by C language with example.

Explain following operators used in C language. 1) Logical 2) Increment/Decrement 3) Bitwise 4) Relational

Distinguish between the following pairs: (I) “getchar” and “scanf” functions. (II) “%s” and “%c” specifications for reading.

What do you mean by type conversion? Why is it necessary?

What is the difference between keywords and identifiers? Explain rules for naming an identifier

Write the structure of a C program.

List out different operators in C and explain any three of them.

What do you mean by type conversion? Give an example.

List the data types provided by the C programming language.

Explain various types of loop available in C with example.

Explain different loops used in c language .Write the difference between while loop and do...while loop.

Explain switch case in ‘C’ with the help of an example.

Explain entry control loop and exit control loop with example.

Explain various types of loop available in C with example.

What do you understand by looping? Explain different types of loops in C with examples and compare them.

Discuss the general form of following decisions – making statements.

(I) IF (II) SWITCH (III) GOTO

Write a program to print the following pattern.

```

      *
     * *
    * * *
   * * * *

```

Define general form of 1) do while loop 2) Nested if 3) goto

Explain switch case statements with examples to read numbers between 1 to 7 and print relatively day Sunday to Saturday.

Write a program to add first n numbers. Get value of n from user.

Describe switch case statements with examples.

Write a program to print all Armstrong numbers in a given range. The Armstrong number is equal to the sum of cubes of its individual digits. For example, $153 = 1^3 + 5^3 + 3^3$. So, 153 is Armstrong's number.

Write a C program to display given pattern

```

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

```

Explain: 1. Nesting if-else statement 2. Use of break statement

Write a program in 'C' to print the following pattern using a loop statement.

```

1
2 2
3 3 3
4 4 4 4
5 5 5 5 5

```

Write a program to print a multiplication table of any number.

Write a program in 'C' to print the following pattern

```

1
23
456
78910

```

Write a C program to input an integer number and check last digit of number is even or odd.

Write a program to generate the first n number of Fibonacci series.

Write a program to select and print the largest of the three nos. using nested-if-else statement.

Explain different loops used in c language .Write the difference between while loop and do...while loop.

Write a program to perform addition, multiplication, subtraction and division with switch statement.

Write a program to print the following pattern

1

0 1

1 0 1

0 1 0 1

What is array? Give an example of array

What is string? Explain with example to find a character from string.

Write a program to reverse the input string

Discuss initialization of one-dimensional arrays with example.

Discuss initialization of Two-dimensional arrays with example.

What is an array? Explain one dimensional and two-dimensional array declarations and initialization with suitable example.

Why it is necessary to give the size of an array in array declaration?

Write a program to display transpose of given 3*3 matrix.

Write a program to check whether entered character is vowel or not?

Write C program to get 20 data from user. Find sum, average, maximum and minimum number.

Write a C program to do following task. (1) Take string from user and print in upper-case (2) Find string length without using strlen() function

Explain how string is defined in C. List the various inbuilt string functions.

Explain strcat(), strlen() and strcpy() functions with examples.

What is string? In how many ways can you accept data in a string? Write a program to accept a string and count the number of vowels present in a string.

What are Functions?

Why are functions required?

What are the advantages and disadvantages of functions?

What are arguments?

What are parameters?

Write a program to add two numbers using a function.

Explain return type of function.

Explain function with no arguments and no return type using an example.

Explain function without arguments and with return type using an example.

Explain function with arguments and return type using an example.

Explain function with arguments and no return type using an example.

Explain function declaration, function calling, function body with example.

Write a program to find the factorial of the given numbers using functions.

Write any program which demonstrates call by value in functions.

What is a function? List various categories of functions. Write a program using function to find maximum of two numbers

What is a user-defined function? Explain actual argument and formal arguments

Write a Program to demonstrate the “call by value” and “call by reference” concept in C

What are recursion functions?

What are the advantages and disadvantages of recursion functions?

Write a C program to find the factorial of the given number using recursion functions.

Write a C program to display fibonacci series using recursion functions.

Define pointer. How can you declare it?

What is pointer to pointer?

What is pointer arithmetic?

Define pointer array.

How can you read a string through keyboard?

What is array of strings?
 Display string —pepperl in reverse order
 Discriminate puts () and gets ()
 Discriminate putchar() and getchar()
 How can you compare two strings?
 Define pointer. How to declare and initialize it.
 Write a C program to illustrate the use of an indirection operator to access the value pointed by a pointer.
 What are the features of pointers? Write a C program to print address of a variable
 Explain the declaration of pointers and pointer to pointer with examples.
 With proper examples explain different arithmetic operations on pointers. [
 Write a C program to show that pointer of any data type occupies same space.
 Explain the concept of functions returning pointers with example
 Write a C program to read and print an array of elements using pointers
 Explain the concept of array of pointers with examples.
 Write a C program to read and display multiple strings using pointers.
 Write a C program to count the number of vowels, consonants, digits, spaces and special characters in a given string.
 Write a C program to read the elements in an array and print the same in reverse order. 9.
 Write a C program to implement strcmp() , strcat() , strcpy() and strlen(). [5+5]
 Write a program to find the average marks obtained by a class of 50 students in a test.
 Explain declaration and initialization of array of strings. [4+6]
 Write a C program to find whether a given string is palindrome or not.
 Discuss about arithmetic operations on characters. [5+5]
 Write a C program to read a set of strings and sort them in alphabetical order.
 Explain the following string handling functions with example: [10] a. strcpy() b. strcmp() c. strcat() d.strlen() e. strncpy()

What is structure? Explain the C syntax of structure declaration with example
 Explain array of structure and structure within a structure with an example
 Write a C program to pass structure variables as function arguments.
 Write a C program to store and print name, USN, subject and IA marks of students using structure
 Explain the difference between array and structures
 Explain with example how to create a structure using „typedef“
 Write a program to maintain a record of „n“ employee detail using an array of structures with three fields (id, name, salary) and print the details of employees whose salary is above 5000
 Write a program using a pointer and function to determine the length of the string.
 Write a program using a pointer to compare two strings.
 Write a program using pointer to copy one string to another string
 Difference between malloc and calloc?
 Is it better to use malloc or calloc?
 How can you determine the size of an allocated memory?
 What is the purpose of realloc?
 What is Static memory allocation and dynamic memory allocation?

Note : Also refer Assignment 1 and 2.