Academic Year 2020-21 Sem – I

Question Bank

Arrays, Functions, Recursive functions

Name of the Faculty: Dipannita.D.Mondal

Name of the Subject/Course: Data Structures and Algorithms

Sr.No	Question	Blooms Taxonomy
1.	Explain array of structures in brief.	Comprehension
2.	Differentiate between local and global scope.	Analysis
3.	Define Array. Explain array of pointers in brief.	Knowledge, Comprehension
4.	Write a C program to explain insertion and deletion of Array Elements.	Application
5.	Explain difference between 1D and 2D array.	Comprehension
6.	Differentiate between macros and functions	Analysis
7.	Write a C function on call by value and call by reference.	Application
8.	Justify the statement “Arrays do not perform bound checking”.	Evaluation
9.	Write about how do we pass an array to a function?	Application
10.	Explain recursive function with a proper C program.	Comprehension
11.	Explain polynomial addition using arrays.	Comprehension
12.	What is an array? Discuss different types of array with examples.	Comprehension

Prepared By

Mrs.Dipannita Mondal

Questions on C Fundamentals: Constants, Variables and Keywords in C, Operators, Bitwise Operations, Decision Control and Looping Statements.

Q. 1. With the help of example, **describe** use of constant, variable & keywords in C language? (Bloom's Level 1)

Q. 2. With the help of example, **explain** use of for loop in C programming? (Bloom's Level 1)

Q. 3. **Compare** between while & do-while loop with appropriate example? (Bloom's Level 3)

Q. 4. **Write** a C program to perform right shift & left shift operation on certain number? (Bloom's Level 1)

Q. 5. **Write** a C program using looping statement for reversing an integer? (Bloom's Level 1)

Q. 6. With the help of example **describe** the importance of break & continue statement in C language? (Bloom's Level 1)

Question bank prepared by Mr. A. A. Trikolikar, Assistant Professor, Dept. of E&Tc, JSPM's Imperial College of Engineering & Research, Wagholi, Pune.

Thank You!

Ds Unit 1: Balasaheb Nawale

Que1) C program to create a file and write data into file

Que2)C program to read a file and display its contents.

Que3)C program to list all files in a directory recursively

Que4)Explain the readdir() function

Que5)What is opendir() function

Que6) How to list all files and directories of a directory

Question Bank

Subject: Data Structures

Bits: Pointers, String Manipulations, Structures, Union, Enumeration, MACROS

1. Explain the standard string functions with example to support each type.
2. Define macro with an example
3. Give applications in which unions rather than structures can be used.
4. Write a C program to multiply two matrices that are represented as pointers. Use a function pointer to the function “Multiply” which take the two matrices as parameter and prints the result of the multiplication.
5. Write a C program to implement any four string handling functions using functions and pointers.
6. Explain about how to declare pointer to a function with an example.
7. Define a structure. Compare structures and unions.
8. Explain the following string functions:
   strcmp(), strchr(), strrev(), strcat(), strlen(), etc.
9. What is pointer, pointer to a pointer. Explain with example.
10. Explain in detail about structure with example.
11. Write a C program to multiply two matrices that are represented as pointers. Use a function pointer to the function „Multiply“ which take the two matrices as parameter and prints the result of the multiplication.

Submitted By,
Mr. Swapnil Pujari
SKNCOE, Pune
8149163063

Question bank preparation as per blooms taxonomy

Pointers, String Manipulations, Structures, Union, Enumeration, MACROSe

- Rajeshwari Thadi

1. Define a pointer? show how a pointer can be declared and initialized with example?
2. Compare Structure and union?
3. Develop a simple program to find i) Length of a string ii) copy a string
4. What is a structure? Declare a structure called books with Author, price ,edition as their members?

5. Develop a program using structure to store the roll no. (starting from 1), name and age of 5 students and then print the details of the student with roll no. 2.

6. Define a macro in C with example?

UNIT -1 (Prof. H.N. Lokhande)

File Handling: File Operations- Open, Close, Read, Write and Append

1. What are the Different file operations? (5M)
2. Write the syntax for opening a file with various modes and closing a file. (5M)
3. Explain the following file handling functions: (5M)
   a. fseek() b. ftell() c. rewind() d. feof()
4. Write a program in C that reads the name of a file and displays the contents of the file on the user screen. (5M)
5. Why it is necessary to close a file during execution of the program? (3M)
6. Explain Command Line Argument in brief. (5M)
7. Enlist the difference between printf Vs. fprintf (5M)
8. Can we read from a file and write to the same file without resetting the file pointer? If not? Why? (2 M)
9. Describe the uses and limitations of getc and putc. (5M)
10. Enlist the difference between Append mode Vs. Write mode (5M)

Subjective Questions on file handling - Rupali Patil

Q.1 What is file handling ? Define File. differentiate between data file and program file .

Q.2 Create a file and write contents, save and close the file.

Q.3 Read file contents and display on the console.

Q.4 Read numbers from a file and write even, odd and prime numbers to separate file.

Q.5 Explain the purpose of function sprint().

Q.6 Describe the file opening mode “w+”. Is FILE a built in data type?

Level 1	1. What are the pointers and array? 2. What is a recursive function? 3. What is NULL pointer?
Level 2	4. How to create an Array? 5. What are the advantages using pointer? 6. Explain pointer declaration and its initialization with an example. 7. When should we use pointers in a C program?
Level 3	8. Write C program to campier 2 arrays 9. Write a program in C to demonstrate the use of &(address of) and *(value at address) operator.
Level 4	10. Write the functions in 'C' : STRCOPY( ) to copy a string to another string using array.
Level 5	11. Explain parameter passing by value and parameter passing by reference with suitable example. 12. Write PUSH function to implement stack using array.
Level 6	13. Write a program in C to get the largest element of an array using recursion. 14. Write a program in C to store n elements in an array and print the elements using pointer 15. Write a program in C to find the maximum number between two numbers using a pointer