

List of experiments (beyond the syllabus prescribed by

G.G.S.I.P.U)

1. Write a Program where it may or may not print counter value in sequence and every time we run it, it produces a different result based on CPU availability to a thread.
2. There are 200 questions on a 3 hr examination. Among these questions are 50 mathematics problems. It is suggested that twice as much time be spent on each maths problem as for each other question. WAP which calculates how many minutes should be spent on mathematics problems.
3. Two polynomials are entered by the user in the form of : $ax^2 + bx + c$ where the powers of x can be any integer value and a,b& c are constants. Now WAP in C and JAVA which calculates the sum, product and difference of the two polynomials.
4. The hexadecimal digits are the ordinary, base-10 digits '0' through '9' plus the letters 'A' through 'F'. In the hexadecimal system, these digits represent the values 0 through 15, respectively. Write a function in JAVA and C named hexValue that uses a switch statement to find the hexadecimal value of a given character. The character is a parameter to the function, and its hexadecimal value is the return value of the function. You should count lower case letters 'a' through 'f' as having the same value as the corresponding upper case letters. If the parameter is not one of the legal hexadecimal digits, return -1 as the value of the function.
5. A coffee shop blends 2 kinds of coffee, putting in 2 parts of a 33p. a gm. grade to 1 part of a 24p. a gm. If the mixture is changed to 1 part of the 33p. a gm. to 2 parts of the filess expensive grade .WAP which calculates that how much will the shop save in blending 100 gms.
6. In June a baseball team that played 60 games had won 30% of its game played. After a phenomenal winning streak this team raised its average to 50% . WAP which calculates how many games must the team have won in a row to attain this average.
7. A company contracts to paint 3 houses. Mr. Brown can paint a house in 6 days while Mr. Black would take 8 days and Mr. Blue 12 days. After 8 days Mr. Brown goes on vacation and Mr. Black begins to work for a period of 6 days. WAP which calculates how days will it take Mr. Blue to complete the contract.

//Viva Questions has to be done after each experiment of GGSIPU, 10 groups of viva Questions are here below

Viva –

- 1. What is the use of string.h header while and where is this file stored.**
- 2. How can we create a header file?**
- 3. Write the function to find the length of a string.**
- 4. Write the function to concatenate two strings.**
- 5. Explain the use of header file.**

2. Viva - Questions:

- 1. What is the difference between iterative and recursive function call?**

- 2. What are formal parameters in functions?**

- 3. How is the structure node declared?**

- 4. Define a link list.**

- 5. Why do we need to store the address of the starting node of a link list for reversing a list.**

3.Viva questions

- 1. What is the tower of Hanoi problem?**
- 2. What are the various ways is stack created?**
- 3. List the models of computation of language.**
- 4. What are objectives of principle of programming language?**
- 5. What are the Paradigms of Programming?**

4. Viva Questions

- 1. List various type of languages.**
- 2. What are the issues for languages?**
- 3. What is translation?**
- 4. What are different types of translation and their roles?**
- 5. What is trade's off of translation.**

5.Viva Questions

- 1. Write any four important uses of programming languages.**
- 2. The levels of acceptance of any language depend on the language description. Comment on this.**
- 3. Write the differences between lexical syntax and concrete syntax of the language.**
- 4. List the design principle of imperative languages.**
- 5. Write the differences between array and enumerated data types in imperative languages?**
- 6. Distinguish between dangling pointers and memory leakage.**

6. Viva Questions

- 1. List the benefits of modular development approach.**
- 2. Give some reasons why computer scientists and professional software developers should study general concepts of language design and evaluation.**
- 3. What constitutes a programming environment?**
- 4. Give an example of how aliasing deters reliability.**
- 5. How do type declaration statements effect the readability of programming language.**

7.Viva Questions

- 1. Write the uses of constructor and destructors in OOP.**
- 2. Describe any one method for bridging the gap between high-level language and machine language.**
- 3. Explain language evaluation criteria and the characteristics that affect them.**
- 4. What Is Backus-aur Form (bnf)?**

8.Viva Questions

1. What is printed by the print statements in the program P1 assuming call by reference parameter passing?

```
ProgramP1()  
{  
    x=10;  
    y=3;  
    func1(y, x, x);  
    print x;  
    print y;  
}  
func1 (x, y, z)  
{  
    y = y + 4;  
    z = x + y + z;  
}
```

2. The most appropriate matching for the following pairs

X: Indirect addressing	1: Loops
Y: Immediate addressing	2: Pointers
Z: Auto decrement addressing	3. Constants

3. How is memory allocated dynamically?

4. What is the use of pointers?

9.Viva Questions

- 1. List the various types of pointers.**
- 2. What is the use of functions? How are actual parameters different from formal parameters?**
- 3. Differentiate between call by value and call by reference?**
- 4. What is Void pointer?**

10. Viva Questions

- 1. What is the role of producer and consumer in the producer consumer problem?**
- 2. What is semaphore?**
- 3. Explain Deadlock recovery?**
- 4. How threads are created?**