

CHAPTER-1 – FUNCTIONS

2/3 MARK QUESTIONS:

1. What is subroutine ?
2. Define function with respect to programming language?
3. **Write the inference you get from X:=(78).**
4. **Differentiate interface and implementation.**
5. Which of the following is a normal function definition and which is recursive function definition
 - i) let rec sum x y:
return x + y
 - ii) let disp :
print 'welcome'
 - iii) let rec sum num:
if (num!=0) then return num + sum (num-1)
else
return num
6. Differentiate parameters and arguments.
7. Give an example of function definition parameter without type.
8. Give an example of function definition parameter with type.
9. **Define recursive function.**
10. Write an algorithm for Chameleons of Chromeland problem using function.

3 MARKS:

1. Mention the characteristics of Interface.
2. **Why strlen is called pure function?**
3. What is the side effect of impure function? Give example.
4. **Differentiate pure and impure function.**
5. What happens if you modify a variable outside the function? Give an example
6. Explain the syntax of function definitions.
7. Write a short note an syntax of function types.

5 MARKS:

1. **What are called Parameters and write a note on (i) Parameter without Type (ii) Parameter with Type**
2. Identify in the following program


```
let rec gcd a b :=  
if b <> 0 then gcd b (a mod b) else return a
```

 - i) Name of the function
 - ii) Identify the statement which tells it is a recursive function
 - iii) Name of the argument variable
 - iv) Statement which invoke the function recursively
 - v) Statement which terminates the recursion
3. **Explain with example Pure and impure functions.**
4. **Explain with an example interface and implementation.**