Department of Computer Science and Engineering
Question Bank - Academic Year (2021-22)

Course Code & Course Name   : 19GES02 & Programming for Problem Solving Techniques

Year/Sem/Sec   : I/I/EEE- A,B

UNIT I – INTRODUCTION TO C PROGRAMMING
PART-A (2 MARKS)

1. What is Computer Software and its Types?

2. What is pseudo code? List the advantages of pseudo code?

3. List the types of operators.

4. What is the difference between ++a and a++?

5. What is Ternary operators or Conditional operators?

6. Draw the Flowchart to find the sum of two numbers.

7. Differentiate between keywords and identifiers.

8. List the various input and output statements in C.

9. Distinguish between variable and constant

10. State Typecasting.

PART-B QUESTIONS
(16MARKS)

1. Describe the structure of the C program with suitable example

2. Illustrate about the various data types in 'C'.

3. Explain in detail Input / Output Statements in C with suitable example.

4. i)Write an algorithm to find largest of Three numbers   (8)

   ii)Draw a flowchart to find largest of Three numbers   (8)

5. i)Write an algorithm to fing the given number is even or odd   (8)

   ii)Draw a flowchart to find the given number is even or odd   (8)

UNIT II CONDITIONAL AND LOOPING STATEMENTS
PART-A (2 MARKS)

1. What is the difference between if and while statement?

2. Compare switch( ) and nested-if statement.

3. Distinguish between while..do and do..while statement in C.

4. Which loop statement is executed at least once even loop test condition if false?

5. Differentiate break and continue statement

6. Mention the use of 'break' and 'continue' statements.

7. What is a looping?

8. Difference between Entry controlled and Exit controlled loop?

9. What are the jumping statements in C Language and how these work?

10. What is infinite loop

PART-B QUESTIONS
(16 MARKS)

1. (a) Compare the following pairs of statements:

    (i) Switch and nested-if-else statement   (4)

    (ii) Break and Continue   (4)

  (b) Write the syntax of if...else statement and illustrate with an example.   (8)

2. Explain the following with examples:

    (i) Ternary or conditional operator.   (5)

    (ii) goto statement.   (5)

    (iii) jumps in loops.   (6)

3. (a) Explain different forms of if statements with examples.   (8)

  (b) Write a program to read the principal amount, period of deposit and rate of interest. and compute the simple interest.   (8)

4. (a) Compare for, while and do-while loops. Give example for each.   (8)

  (b)Write a C program and draw flowchart to find the sum of first 10 natural numbers(8)

5. (a).Write an algorithm and program for finding the biggest of 3 numbers.(using ternary

operator) (8)

(b).Write the different loop control structures available in C. Explain each one of them briefly. (8)

UNIT III FUNCTIONS AND ARRAYS
PART-A (2 MARKS)

 1. What are functions in C?

2. How will define a function in C?

3. What is the need for functions?

4. Define recursion

5. Distinguish between Call by value Call by reference. Call by value Call by reference.

6. Compare actual parameter & formal argument

7. What is an array? How to initialize an array?

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

9. What is the difference between an array and pointer?

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

PART-B QUESTIONS
(16 MARKS)

1. What are functions? How are they useful? What are the different kinds of user defined functions and what is the need of user defined functions?

2. With suitable example illustrate "call by value and call by reference" techniques of passing parameters for functions

3. What is an Array? Discuss how one dimensional array can be declared and their elements are accessed?

4. With suitable example explain the process of inserting & deleting an element into an 1D-Array

5. Write a C program to find the sum and differences of matrices using 2D-Array

UNIT IV INTRODUCTION TO PYTHON PROGRAMMING
PART-A (2 MARKS)

1. What is Python? List the two modes in Python.

2. Give the various data types in Python

3. Point out the rules to be followed for naming any identifier

4. Compose the importance of indentation in Python

5. Demonstrate the various operations in Python

6. Discover the difference between logical and bitwise operator

7. Define recursive function.

8. Define array with an example.

9. Differentiate for loop and while loop.

10. Classify global variable with local variable.

PART-B
QUESTIONS(16 MARKS)

1. Explain in detail about the various operators in python with suitable examples.

2. What is call by value and call by reference and explain it with suitable example

3. Write a python program to find the given number is odd or even.

4. Explain with an example – while loop, break statement and continue statement in Python

5. Explain the syntax and flowchart of the following loop statements

      i) for loop

      ii) while loop

      iii) if,if else

      iv) nested if else

      v) Recursive function

UNIT V STRINGS, LISTS, TUPLES AND DICTIONARIES
PART-A (2 MARKS)

1. State quicksort.

2. What is the difference between lists and tuples?

3. What is a dictionary in Python?

4. What are split(), sub(), and subn() methods in Python?

5. Define pickling and unpickling in Python.

6. Explain all file processing modes supported in Python.

7. Write the difference between array and list.

8. Differentiate between NumPy and SciPy.

9. In Python what is slicing?

10.Mention five benefits of using Python?

PART-B
QUESTIONS(16 MARKS)

1. Describe the following i) Creating the list ii) Accessing values in the lists iii) Updating the list iv)

   Deleting the list elements

2. Illustrate the ways of creating the Tuple and the Tuple assignment with suitable programs

3. Explain the properties of Dictionary keys with examples. ii) Explain the operations for

    Dynamically manipulating dictionaries.

4. Write a python program for quick sort

5. Write python program for merge sort

Course Faculty   **HoD**