Assignment

Class:12   **Subject: Computer Science**

Unit 1
CHAPTER – 1.
PART - A

I. Multiple Choice Questions

1. The Small sections of code that are used to perform a particular task is called ------------- ?
   a) Subroutines   b) files   c) Pseudo code   d) modules

2. Which of the following is a unit of code that is often defined within a greater code structure?
   a) Subroutines   b) function   c) files   d) modules

3. Which of the following is distinct syntactic block?
   a) subroutines   b) function   c) Definition   d) Modules

4. The variables in a function definition are called ---------------?
   a) Subroutines   b) function   c) definition   d) parameters

5) The values which are passed to a function definition are called ------------?
   a) Arguments   b) Subroutine   c) function   d) definitions

6. Which of the following are mandatory to write the type annotations in the function definition?
   a) Curly braces   b) Parenthesis   c) square brackets   d) indentations

7. Which of the following defines what an object can do?
   a) Operating system   b) Compiler   c) Interface   d) Interpreter

8. Which of the following carries out the instruction defined in the interface?
   a) Operating system   b) Compiler   c)Implementation d) Interpreter

9. The function which will give exact result when same arguments are passed are called ------------ ?

  a) Impure functions   b) Partial functions   c) Dynamic functions

  d) Pure functions

10. The functions which cause side effects to the arguments passed are called -------------- ?

  a) Impure functions   b) Partial functions

  c) Dynamic functions   d) Pure functions

PART - B

II.Very Short Answer.

1. What is subroutine?

2. What is function?

3. What is Parameter?

4. What is Recursive function?

5. Define object?

PART – C

III. Short Answer

1. Differentiate Interface and Implementation?

2. Mention the characteristics of interface?

3. Why strlen is called pure function?

4. What is the side effect of impurefunction? Give example?

5. Differentiate Pure and Impure function?

PART – D

IV.Write in detail.

1. What are called Parameter 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 gcdb(a mod b) else return a

i) Name of the function.

ii) Identify the statements which tell it is recursive function.

iii) Name of the argument variable

iv) Statement which invoke the function recursively.

v) Statement which terminates the recursion.

Assignment

Unit 1
CHAPTER 2
PART - A

I) MULTIPLE CHOICE QUESTIONS

1. Which are the following function that build the abstract data type?

   a)Constructions   b) Destructors   c) Recursive d) Nested

2. Which of the following functions that retrieve information from the data type?

   a) Constructors   b) Selectors   c) Recursive d) nested

3) The data structure which is a mutable ordered sequence of elements is

   called ------------- ?

   a) Built-in   b) List   c) Tuple   d) Derived List

4. A sequence of immutable object is called --------?

   a) Built in   b) List   c) Tuple   d) derived data

5. The data type whose representation is known are called -------------?

   a) Built in data type   b) derived datatype

   c) concrete data type   d) abstract data type

6. The data type whose representation is unknown are called ------------?

   a) Built in data type   b) Derived data type

   c) Concrete data type   d) Abstract data type

7. Which of the following is a compound structure?

   a) Pair   b) Triplet   c) Single   d) Quadrat

8. Bundling two values together into one can be considered as_____?

   a) Pair   b) Triplet   c) Single   d) Quadrat

9. Which of the following allow to name the various parts of a multi – item object?

a) Tuples   b) Lists   c) classes   d) Quadrats

10. Which of the following is constructed by placing expression within square bracket?

a) Tuple   b) List   c) classes   d) quadrats

II. VERY SHORT ANSWER QUESTIONS

1. What is abstract data type?
2. Differentiate constructors and selectors?
3. What is a Pair? Give an example?
4. What is a List? Give an example?
5. What is a Tuples? Give an example?

III) SHORT ANSWERS QUESTIONS

1. Differentiate Concrete data type and abstract data type.
2. What are the different ways to access the elements of a list. Give example
3. Identify which of the following are List, Tuple and class.

a) arr[1,2,34]   b) arr(1,2,34)

c) student [rno, name, mark]   d) day = ('sun', 'mon', 'tue', 'wed')

e) x=[2,5,6,5, [5,6] , 8.2]   f)employee [eno, ename, esal, eaddress]

4. What is data Abstraction? How will you facilitate data abstraction?
5. Identify which of the following are constructors and selectors?

a) N1 = number ( )   b) accetnum (n1)

c) displaynum (n1)   d) eval (a/b)

e) x, y = makeslope (m) / makeslope (n)   f) display ( )

ANSWER IN DETAIL

1. What is a List? Why List can be called as Pairs. Explain with suitable example ?
2. What is Tuple? Explain the concept of Tuple in Python ?

Assignment

Class:12   **Subject: Computer Science**

Unit 1

CHAPTER – 3

PART - A

I.   Choose the best Answer

1. ...._ refers to the visibility of variables, parameters and functions in one part of a program to another part of the same program?

    a) Scope   b) Memory

    c) Address   d) Accessibility

2. The process of binding a variable name with an object is called?

    a) Scope   b) Mapping

    c) Late binding   d)Early binding

3. Which of the following is used in programming languages to map the variable and object?

            a) ::   b) :=   c) =   d) ==

4. The ------------ rule is used to decide the order in which the scopes are to be searched for scope resolution.?

            a) LEGR   b) LEGB

            c) LEBG   d) LEGP

5. How many types are there in variable scope?

    a) 3   b) 4

    c) 2   d) 5

6. A variable which is declared outside of all the functions in a program is known as----?

            a) Global variable   b) Enclosed variable

            c) Built in variable   d) Local variable

7. A function with in another function is called-------?

        a) Outer function   b) Inner function

        c) Nested function   d) None of the above

8. The process of subdividing a computer program into separate sub-programs is called----?

        a) Procedural Programming   b) Modular Programming

        c) Event Driven Programming   d) Object Oriented Programming

9................ members are accessible from outside the class?

        a) Public members   b) Protected members

        c) Secured members   d) Private members

10. All members in a Python class are ---------- by default?

        a) Private   b)   Public

        c) Protected   d)   None of the above

II.   Very Short questions

1. What is scope?
2. What is mapping?
3. What do you mean by Namespaces?
4. Name the types of variable scope?
5. What is Modular Programming?

III.   Short Questions

1. Define Local Scope with an example?
2. Define Global Scope with an example?
3. Write about LEGB rule?
4. Write short notes on nested function:?
5. What are the access modifiers?

IV. Answer in Detail

1. Explain the types of scopes for variable ?
2. LEGB rule with example?

Assignment

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Unit 1
CHAPTER – 4
PART - A

I. Choose the best Answer

1. A finite set of instructions to accomplish a particular task is called --------- ?

　　a) Flow chart　　　b) Program

　　c) Algorithm　　　d) Structure

2. The word comes from the name of a Persian mathematician Abu Ja'far Mohammed ibn-i Musa al khowari zmi is called----------?

　　　　a) Flowchart　　b) Flow

　　　　c) Algorithm　　d) Syntax

3. An algorithm that yields expected output for a valid input is called…………..?

　　a) an algorithmic solution　　b) design an algorithm

　　c) an algorithmic strategy　　d) an algorithmic implementation

4. Analysis of algorithms and performance evaluation can be divided into how many phases?

　　　　a) 5　　　　　　　　　　　　b) 3

　　　　c) 2　　　　　　　　　　　　d) 4

5.……….. of an algorithm is the amount of memory required to run to its completion?

　　　　a) Space complexity　　b) Time complexity

　　　　c) Space factor　　　　　d) Time factor

6. Two main measures for efficiency of an algorithm are …….. ?

　　　　a) Processor and memory　　b) Complexity and capacity

　　　　c) Time and space　　　　　d) Data and space

7………… is often used to describe the worst case of an algorithm?

    a) Big Ω b) Big Ό

    c) Big Θ d) None of the above

8. Linear search also called ………….. ?

    a) Binary search   b) Sequential search

    c) Half-Interval search   d) None of the above

9. Binary search also called ………..?

    a) Sequential search   b) Linear search

    c) Half-Interval search   d) None of the above

10.In which type of search, the list of elements in an array must be sorted first?

    a) Binary search   b) Linear search

    c) Sequential search   d) All the above

II. Very Short Questions

1. Define Algorithm.
2. What is algorithm analysis?
3. Define time complexity?
4. What is dynamic programming?
5. What is memoization?

III. Short Questions

1. List the characteristics of an algorithm?.
2. Discuss about space complexity?
3. Write a note on Asymptotic notation?
4. Write short notes on Binary search ?
5. What are the steps are used to in Dynamic programming?

IV. Answer in Detail

1. Discuss about linear search algorithm?
2. Explain Selection sort with pseudo code?

Assignment

Class:12   **Subject: Computer Science**

Unit 1

CHAPTER – 5

PART - A

I.   **Multiple Choice Questions :**

1. Who developed Python?

    a. Ritche   b. Guido Van Rossum

    b. Bill Gates   d. Sundar Pitchai

2. Which of the following shortcut is used to create new Python Program?

    a. Ctrl+C   b. Ctrl+F

    c. Ctrl+B   d. Ctrl+N

3. Which of the following shortcut is used to save Python?

    a. Ctrl+S   b. Ctrl+V

    c. Ctrl+C   d. Ctrl+N

4. Python files saved with extension -----?

    a. .py   b. .pr

    c. .pq   d. .ps

5. Which of the following is not a keyword in Python?

    a. break   b. while

    c. continue   d. operators

6. Which Operator is also called as Conditional Operator?

Conditional Operator)

    a. Ternary   b. Relational

    c. Logical   d. Assignmen

7. The String can be enclosed in ------?

    a. Single Quotes   b. Double Quotes

    c. Triple Quotes   d. All the above

8. Identify the Assignment Operator?

    a. =   b. ==

    c. %   d. +

9. Expand IDLE ?

      a. Integrated Development Learning Environment

      b. Integrated Develop Learning Environment

      c. Indian Developer Least Education

      d. Interior Development Learning Environment

10. Which of the following digit is used to hexadecimal integer?

      a. OX   b. X

      c. 0   d. 1

II. Very Short Questions :

1. What are the different modes that can be used to test Python Program ?

2. What is the use of Input and Output Functions?

3. Define Tokens?

4. What are Relational Operators?

5. Define Conditional Operator?

III. Short Questions :

1. What are the key features of Python?

2. Define logical operators?

3. Write short notes on Escape Sequence with example?

4. What are the rules for Identifiers?

5. Define String Literals?

IV. Answer in Detail:

1. Describe in detail the procedure Script mode Programming?

2. Explain the operators in Python?