Class 12 **Computer Science**

Assessment – 1, November 2021 – 22
Answer Key

Part I

1. C) Algorithm
2. D) Selection Sort
3. A)>>>
4. D) Ctrl + N
5. C) comma(,)
6. B) Relational
7. C)else if
8. A)1 2
9. A)for
10. B):

Part II

11. Searching is the step by step procedure to used to locate specific data among a collection of data.
    Types: Binary Search, Linear Search
12. Python breaks each logical line into a sequence of elementary lexical components knownas Tokens.
    Normal tokens are Identifiers, Keyboards, Operators, Delimiters and Literals
13. (i) Interactive mode , (ii) Script Mode
14. (i) Sequential Statements, (ii) Alternative or Breaking Statements (iii) Iterative or Looping Statements
15. if<condition>:
    statement-block1
    else:
    Statement-block2

Part - III

16. Input, Output, Finiteness, Definiteness, Effectiveness, Correctness, Simplicity, Unambiguous, Feasibility, Portable, Independent.
17. "=" is a simple assignment operator.
    It assigns value in the right side of the operator to the variable in the left side.
    Ex: a=5 # assigns the value 5 to the variable a.
18. Sequence of characters surrounded by quotes.
    Python supports single, double and triple quotes for a string.
    A character literal is a single character surrounded by single or double quotes.
    The value with triple quote "' "' is used to give multi line string literal.
    Ex: Char = "C"
    Strings ="Hi"
19. A=['A','B','C,','D','E']
    for i in range(0,6):
        for j in range(0,i):
            print(a[j],end=" ")
        else:
            print()
20.

Break	Continue
It terminates the loop containing it	Used to skip the remaining part of a loop

Control flows to the statement immediately after the body of the loop	Control flows starts with next iteration
Syntax : Break	Syntax: Continue

Part – IV

21. a) **Linear Search Algorithm:**

Linear search also called sequential search is a sequential method for finding a particular value in a list.

This method checks the search element with each element in sequence until the desired element is found or the list is exhausted.

In this searching algorithm, list need not be ordered.

Pseudo code

1. Traverse the array using for loop
2. In every iteration, compare the target search key value with the current value of the list.
3. If the values match, display the current index and value of the array

   If the values do not match, move on to the next array element.

   If no match is found, display the search element not found.

To search the number 25 in the array given below, linear search will go step by step in a sequential order starting from the first element in the given array if the search element is found that index is returned otherwise the search is continued till the last index of the array. In this example number 25 is found at index number 3.

index	0	1	2	3	4
values	10	12	20	25	30

21. b) **input() function**

In Python, **input( )** function is used to accept data as input at run time. The syntax for **input()** function is,

Syntax : Variable = input ("prompt string")

Where, **prompt string** in the syntax is a statement or message to the user, to know what input can be given. If a prompt string is used, it is displayed on the monitor; the user can provide expected data from the input device.

If prompt string is not given in **input( )** no message is displayed on the screen, thus, the user will not know what is to be typed as input.

Ex1:

```
>>> city=input ("Enter Your City: ")
        Enter Your City: Madurai
```

Ex2:

```
x = int (input("Enter Number 1: "))
y = int (input("Enter Number 2: "))
```

print() function

In Python, the **print()** function is used to display result on the screen.

The **print ( )** evaluates the expression before printing it on the monitor. The print () displays an entire statement which is specified within print ( ). **Comma (,)** is used as a separator in **print ( )** to print more than one item.

The syntax for **print()** is as follows:

Ex:

```
print ("string to be displayed as output " )
print (variable )
```

22. a) for loop:

for loop is the most comfortable loop.

- It is also an entry check loop.
- The condition is checked in the beginning and the body of the loop(statements-block 1) is executed if it is only True otherwise the loop is not executed

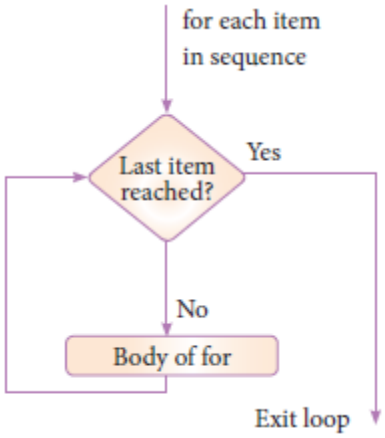
Syntax:

for counter_variable in sequence:
statements-block 1
[else: # optional block
statements-block 2].

for loop uses the *range()* function in the sequence to specify the initial, final and increment values. *range()* generates a list of values starting from **start** till **stop-1.**

The syntax of range() is as follows:

range (start,stop,[step])
Where,
start – refers to the initial value
stop – refers to the final value
step – refers to increment value, this is optional part.



Example:
```
for i in range (2,10,2):
    print (i)
```