

Periodic Test -1

Name: _____
Class: 12 Sec:
Date:

Subject: Computer Science
Time:
Max Marks:

General Instructions:

All questions are compulsory.
Programming Language: Python

Section A

1. a. Which of the following is valid arithmetic operator in Python: 1
(i) // (ii) ? (iii) < (iv) and
- b. Write the type of tokens from the following: 1
(i) if (ii) roll_no
- c. Name the Python Library modules which need to be imported to invoke the following functions: 1
(i) sin() (ii) randint ()
- d. Find and write the output of the following python code: 1

```
def fun(s):
    k=len(s)
    m=""
    for i in range(0,k):
        if(s[i].isupper()):
            m=m+s[i].lower()
        elif (s[i].isalpha()):
            m=m+s[i].upper()
        else:
            m=m+'bb'
    print(m)
>>fun('school2@com')
```

- e. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code. 1
- ```

30=To
for Kin range(0,To)
 IFk%4==0:
 print (K* 4)
 Else:
 print (K+3)

```

- 5 f. Find and write the output of the following python code: 1
- ```

def change(P,Q=30):
    P=P+Q
    Q=P-Q
    print( P, "#",Q)
    return (P)
R=150
S=100
R=change(R,S)
print(R,"#",S)
S=change(S)

```

- g. What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum values that can be assigned to each of the variables FROM and TO. 1

```

import random
AR=[20,30,40,50,60,70];
FROM=random.randint(1,3)
TO=random.randint(2,4)
for K in range(FROM,TO+1):
    print (AR[K],end="#")

```

2. a. Observe the following code and answer the questions that follow: 1
- ```

File=open("mydata","a") _____ #Blank1
File.close()

```

- a. What type (Text/Binary) of file is mydata?
- b. Fill the Blank1 with statement to write "ABC" in the file "mydata"

- b. Which is the correct form of declaration of dictionary? 1
- (i) Day={1:'monday',2:'tuesday',3:'wednesday'}
  - (ii) Day=(1;'monday',2;'tuesday',3;'wednesday')
  - (iii) Day=[1:'monday',2:'tuesday',3:'wednesday']
  - (iv) Day={1'monday',2'tuesday',3'wednesday'}

- c. Compare and contrast the use of iteration and recursion in terms of memory space and speed. **1**
- d. The following code is not giving desired output. We want to input value as 20 and obtain output as 40. Could you pinpoint the problem? **1**  
`n=input("enter number")  
d=n*2  
print(d)`
- e. Why does the expression  $2+3*4$  result in the value 14 and not the value 24. **1**
- f. Write a statement in python to perform the following operations. **1**  
a. To open a text file "MYPET.TXT" in write mode  
b. To open a file file "MYPET.TXT" in read mode
- g. Predict the output **1**  
`def codo(n):  
if n==0:  
print("finally")  
else:  
print(n)  
codo(n-3)  
codo(15)`

### Section B

3. Why is base case so important in a recursive function? When does infinite recursion occur? **2**
4. Write a user-defined function in python that displays the number of lines starting with 'H' in the file para.txt. Example , if the file contains: **2**  
**Whose woods these are I think I know**  
**His house is in the village though;**  
**He will not see me stopping here**  
**To watch his woods fill up with snow**  
**Then the line count should be 2**
5. Write a method in python to read lines from a text file DIARY.TXT and display those lines which start with the alphabet 'K'. **2**
6. How is method read() different from readline() in python? **2**
7. Write a python function generate fibo(n) where n is the limit using a generator function Fibonacci (max) where max is the limit n that produces Fibonacci series.(using recursive function) **2**  
OR  
Write a Recursive function recurfactorial(n) in python to calculate and return the factorial of number n passed to the parameter.

8. Write a method/function AEDISP() in python to read lines from a text file WRITER.TXT, and display those lines, which are starting either with A or starting with E. 2  
 For example : If the content of the file is  
 A CLEAN ENVIRONMENT IS NECESSARY FOR OUR GOOD HEALTH.  
 WE SHOULD TAKE CARE OF OUR ENVIRONMENT.  
 EDUCATIONAL INSTITUTIONS SHOULD TAKE THE LEAD.  
 The method should display  
 A CLEAN ENVIRONMENT IS NECESSARY FOR OUR GOOD HEALTH.  
 EDUCATIONAL INSTITUTIONS SHOULD TAKE THE LEAD
9. What is the difference between local and global variables? Explain giving example. 2
10. (c) Consider the following function calls with respect to the function definition. Identify which of these will cause an error and why? 2  
 def calculate(a,b=5,c=10):  
     return a\*b-c  
 i) calculate( 12,3)  
 ii) calculate(c=50,35)  
 iii) calculate(20, b=7, a=15)  
 iv) calculate(x=10,b=12)

### Section C

11. a. Can a function return multiple values? Justify giving example. 2
- b. Predict the output of the following code fragment : 1  
 def wish(message, num=1):  
     print(message \* num)  
 wish('Good',2)  
 wish("Morning")
- c. Predict the output of the following code fragment : 1  
 def display(x=2,y=3):  
     x=x+y  
     y += 2  
     print(x,y)  
 display()  
 display(5,1)  
 display(9)
12. a. What will be the output of following program? 1  
 def increment(n):  
     n.append([4])  
     return n  
 L=[1,2,3]  
 M=increment(L)  
 print(L, M)

- b. What do you understand by function? Write the types of function are there in python? **2**
- c. Find the errors in code given below: **2**
- |                                                                                                                                                                                                        |                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a) Def minus(total, decrement)</p> <p style="padding-left: 20px;">output = total – decrement</p> <p style="padding-left: 20px;">print(output)</p> <p style="padding-left: 20px;">return(output)</p> | <p>b) define check( )</p> <p style="padding-left: 20px;">N=input('Enter N:')</p> <p style="padding-left: 20px;">i=3</p> <p style="padding-left: 20px;">answer = 1+i**4/n</p> <p style="padding-left: 20px;">return answer</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
- 13.** a. What is package? How is a package different from module? **2**
- b. Why should the from <module> import <object> statements be avoided to import objects? **1**
- c. Write a function file\_long() that accepts a filename and reports the file's longest line. **2**
- 14.** a. Write a program that multiplies two integer numbers without using the \* operator, using repeated addition using while statement. **2**
- b. What is the output of following code fragment? Explain. **2**
- ```

out=open("output.txt","w")
out=write("hello,world!\n")
out.write("How are you?")
out.close()
open("output.txt").read()

```
- c. Rewrite the following python code after removing all syntax error(s). Underline the corrections done. **2**
- ```

def main()
 r=input("enter any radius"):
 A-pi*maths.pow(r,2)
 print("Area="+a)
 main()

```