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Summer Vacation Assignment (Session 2022-23)
Class-XII (Computer Science (083))

1. Write the valid identifiers among the following:
max value, global, D.O.B., 23sum, OR, _file, data-store, my.data, name2, for5

2. Name the python library modules which need to be imported to invoke the following functions:
(i) log( ) (ii) randint( )

3. …… in python start with hash symbol (#).

4. Write the output for the following:
(i) >>>type('22/7') (ii) >>>type(False)
(iii) >>> 10+(2**3-5)/2 (iv) >>>print(print("python"))

5. Write the name of the token for the following:
(i) xy (ii) 55.6 (iii) and (iv) while

6. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
a=int("Enter value of a:")
for in range(3,10):
    if a=5:
        print(a)
    else:
        print[a]
```

7. Find and write the output of the following python code:

```
def Test(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+'py'
    print(m)
Test('kvs@19ExAm')
```

8. Look at the following python code and find the possible output(s) from the options (i) to (iv) following it. Also, write the highest and lowest values that can be pointed by label VAL.

```
import random
for k in range(4):
    VAL = 5+random.randint (6,13)
```

print(VAL, '#', end=" ")

(i) 10#13#17#12# (ii) 11#16#17#17#
(iii) 18#12#15#17# (iv) 14#19#16#12#

9. Define mutable and immutable data types. Write the name of immutable data types in python.

10. Which one is invalid identifier in the following:
(a) hello (b) for_you (c) 4you (d) _add8

11. Write the output for the following:
(i) >>>len('\ab') (ii) >>>bool('0')

(iii) >>> 'easy'*2 (iv) >>> 'string method'.isalnum( )

12. Write the following operators in descending order according to their precedence:
( ), **, and, &, *, +

13. Write difference between break and continue.

14. Write a statement to add a single element (element is =57) in given tuple:
T = (15, 28, 45, 78)

15. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
str=list("Python Programming@2022')
for Y is range(len(str)-1):
    if Y==7:
        str[Y]=str*2
    elif(str[Y].isupper():
        str[Y]=str*3
    elif(str[y].isdigit()):
        str[Y]='D'
print(str)
```

16. Find and write the output of the following python code: a=0

```
for i in range(1,3):
    for j in range(i):
        b=i+j-1
          if b%2==0:
              a+=b+5
        elif b%3==0:
              a+=b-1
print("a = ", a)
```

17. Find and write the output of the following python code:
L=['get', 'ready',['to', 'redefine'],'your',['lifestyle']]

```
n=len(L)
print(L[1:2]*3)
L.append("with")
print(L[:n:3])
L[3]='program'
print(L[2][1][2])
print(n)
```

18. What is function? Explain formal and actual parameters with example.

19. Write the output of the following python code:

```
def Example(x, y, z=5):
    z, x= y, z
    return x

t=Example(2,7)
print(t)
w=Example(6,2,4)
print(w)
```

20. Look at the following python code and find the possible output(s) from the options (i) to (iv) following it. Also, write the highest and lowest values that can be pointed by label Mark.

```
import random
for b in range(10,14):
    Mark = random.randint (4,15)
    print(Mark+b, '%',  end=' ')
```

(i) 23%20%18%22%
(ii) 16%27%28%20
(iii) 20%29%16%15
(iv) 14%14%19%28%

21. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
for k in (2, 9):
     if k%2=0:
          print(Even)
     else
          print("Odd")
```

22. Look at the following python code and find the possible output(s) from the options (i) to (iv) following it. Also, write the highest and lowest values that can be pointed by label VAL.

```
import random
for m in range(1,5):
    VAL = random.randint (21,27)+5
    print(VAL, '@',  end=" ")
```

(i) 27@30@32@26@
(ii) 28@21@30@33@

(iii) 32@25@30@26@ (iv) 29@26@31@31@

23. Which one is invalid identifier in the following:
(a) key (b) for_you (c) 8ab (d) _add2

24. What is meaning of scope of a variable?

25. Name the python library modules which need to be imported to invoke the following functions:
(i) ceil( ) (ii) date( )

26. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
a=int("Enter value of a:")
for in range(3,52,2):
    if a=5:
        print(a)
    else:
        print[a+3]
```

27. Look at the following python code and find the possible output(s) from the options (i) to (iv) following it. Also, write the highest and lowest values that can be pointed by label Val.

```
import random
for n in range(10,14):
   Val = random.randint (4,15)
   print(Val+n, '*',  end=' ')
```

(i) 23*20*18*22* (ii) 16*27*28*20
(iii) 20*29*16*15 (iv) 14*14*19*28*

28. How many times the following loop will execute? n=512

```
while n>1:
   if n%2==0:
      n=n//2
   else:
      n=(3*n)+1
```

29. Find and write the output of the following python code:

```
def Exam(s):
   k=len(s)
   m=''      #empty string
   for i in range(0,k):
      if(s[i].isupper()):
         m=m+s[i+1].lower( )
      elif s[i].isalpha():
          m=m+s[i].upper( )
```

```
        else:
            m=m+'T'
    print(m)
Exam('TeStPT&3y')
```

30. Write a user defined function SUM_EVEN( ) and pass a list to the function. Find the sum of even values present in the list and display the result.

31. Write a function UpperChar(str) by taking a string from the user and convert those letters in upper case which are present at odd index and convert the letters in lowercase which are present on even index in the string.

32. Write a function SeqSearch(L) to search an element from a list.

33. Write a function named as SumNatural(n) to find sum of n natural numbers.

34. Suppose that L is a list as given below:

["Wash", "your", "hands", ["regularly", "to"], "avoid", "spread", "the", "virus"]

What does each of the following expressions evaluate to ?

(i) L[3:4][0]
(ii) L[3:4][0][1]
(iii) L[3:4][0][1][0]
(iv) "to" in L