MADRAS INSTITUTE OF TECHNOLOGY
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ASSOCIATION OF COMPUTER TECHNOLOGISTS

PARSELTONGUE - PRELIMS

RULES:

- On the answer sheet team member should stick their team **QR** and write their unique participant id below it.
- Don't leave the app during the test.
- Time limit – **45 minutes.**
- Keep your mobile in airplane mode.
- Questions 1 to 15 carry 1 mark each.
- Questions 16 to 21 carry 2 marks each.
- Questions 22 to 25 carry 5 marks each.
- Questions marked **(*)** have additional weightage and are used as tiebreakers.

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1)

```
a_b_c = 1,000,000
print(type(a_b_c))
```

Predict the output of the above code:

a) <class 'list'>

b) <class 'int'>

c) Error

d) None of these

2)

```
print('abef'.partition('cd'))
```

Predict the output of the above code:

a) (‘abef’)

b) (‘abef’,’’,’’)

c) (’’)

d) (‘abef’,’cd’,’’)

3)

```
l = [3,2,3,3,2,3]
l.remove (3)
print(ord(max(str(l))))
```

Predict the output of the above code:

a) 50

b) 93

c) 91

d) None of these

4)

Consider the data types t = (2,3,’a’,’a’) and s = {3,4}. Guess the changes in the data types after the operation t[0]=1 and s.add(3) has occurred.

a) (1,2,3,’a’.’d’) {3,4,3}

b) TypeError ValueError

c) (1,2,3,’a,’d’) ValueError

d) TypeError {3,4}

5)

Consider the string s=’ACACACABACACAZBA’. Expected Output when the statement s.count(‘ACA’) is executed.

a) 5

b) 4

c) 3

d) 2

6)

print (593.4 // 27.7) = ?

a) 21.422382671480143

b) 21.0

c) 22.422382671480143

d) 22.0

7)

Write the output of the following program:

```
list=['p','r','a','y','a','t','n','a']
for i in list:
      list.remove(i)
      print(list)
```

8)

Find the output of the following program:

```
class python:
      def __init__(max):
            self.max=max
p=python(5)
```

9) (*)

Find the output of the following program:

```
a= [0, 1, 2, 3]
b= []
for a[-1] in a:
      b.append(a[-1])
print(b)
```

a) [0, 1, 2, 3]

b) [1, 1, 1, 1]

c) [0, 1, 2, 2]

d) [3, 0, 1, 2]

10)

```
print(bool('False'))
print(bool())
```

a) False, True

b) None, None

c) True, True

d) True, False

11)

Write the output of the following program:

```
x= [1, 0, 7, 8, 22, 0, 0, 'parsel']
print(list(filter(bool,x)))
```

12)

What is the output of the following program?

```
x= [39, 3, 6, 5, 11, 9, 4]
x= x[::-1]
print(x[-4])
```

13) (*)

Write the output of the following program:

```
j= {‘a’:1, ‘b’:3, ‘a’:9, ‘d’:5}
print(j[‘a’])
```

14)

Find the output of the following program:

```
i=0
while i < 3:
      print(i)
      i=i+1
else:
      print(0)
```

a) 0 1 2 3 0

b) 0 1 2 0

c) 0 1 2

d) Error

15)

What is the output of the following program?

```
x=[‘kvr’, ‘avr’]
for i in x:
      i.upper()
print(x)
```

16)

Debug the following statement:

```
print("x:%3d,y:%2d%"(240,120))
```

17) (*)

Write the output of the following program:

```
def f(x,l=[]):
      for i in range(x):
            l.append(i*i)
      print(l)
f(2)
f(2,[1,2,3])
f(3)
```

18)

Write the output of the following program:

```
l1 = [1,2,3]
l2 = [‘a’]
r=zip(l1,l2)
print(tuple(r))
```

19)

Write the output of the following program:

```
names1=['amir','barry','chales','dao']
names2=names1
names3=names1[:]

names2[0]='alice'
names3[1]='bob'
sum1=0

for ls in (names1,names2,names3):
    if ls[0]=='alice':
        sum1+=1
    if ls[1]=='bob':
        sum1+=10
print(sum1)
```

20)

```
import re
s='abc123 xyz666 lmn-11 def77'
t=re.sub(r'\b([a-z]+)(\d+)',r'\2\1:',s)
print(t)
```

21)

Write a Python program to sort a dictionary, both in ascending and descending order.

22) (*)

Write a Python program which prints Parseltongue and self destructs after 5 seconds.

23)

What does the function ‘func’ do? Write the output of the given program.

```
def func(dic,n=1):
    if len(dic)==1 and not isinstance(dic,dict):
        return n+1
    return max(func(j,n+1) for j in dic)
d = {'foo': {'bar': {'baz':0},'spam': {'ham': {'monty': 1}, 'eric': 'idle'}}, 'john': 'cleese'}
print(func(d))
```


24)

Predict the output for the following program.

```
source = ['1', '2', '3', '4', '5', '6', '7', '8', '9', 'a', 'b']
list1 = source[::4]
print(list1)
list2 = source[1::4]
list3 = source[2::4]
list4 = source[3::4]
print(list2)
print(list3)
print(list4)
C = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n']
def list_slice(S, step):
    return [S[i::step] for i in range(step)]
print(list_slice(C,3))
```

25) (*)

Find the output for the following code:

```
a0=dict(zip(('a','b','c','d','e','f'),(1,2,3,4,5)))
print(a0)
a1=range(10)
print(a1)
a2=sorted([i for i in a1 if i in a0])
print(a2)
a3=sorted([a0[s] for s in a0])
print(a3)
a4=[i for i in a1 if i in a3]
print(a4)
a5={i:i*i for i in a1}
print(a5)
a6=[[i,i*i] for i in a1]
print(a6)
```