Total No. of Questions – [3] Total No. of Printed Pages: 4

| G.R. No. | |
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| PAPER CODE | U111 – 202B |
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# DECEMBER 2021(INSEM+ ENDSEM) EXAM
# F.Y. B. TECH. (SEMESTER - I)
# COURSE NAME: PYTHON FOR ENGINEERS
# COURSE CODE: CS10202B

**(PATTERN 2020)**

Time: [2Hr] [Max. Marks: 60]

**(*) Instructions to candidates:**

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data where ever required**

Q.1 **Solve the following** **[30]**

i) Select the correct output of the following String operations. [2]

```
strOne = str("pynative")
strTwo = "pynative"
print(strOne == strTwo)
print(strOne is strTwo)
```

A.false false B.true true C.true false D.false true

ii)Choose the correct way to access value **20** from the following tuple [2]

aTuple = ("Orange", [10, 20, 30], (5, 15, 25))

A.aTuple[1:2][1] B. aTuple[1:2](1) C. aTuple[1:2][1] D.aTuple[1][1]

iii)Which of the following will delete key_value pair for key="Monkey" in dictionary? [2]

dic={"zebra":"wild","Monkey":"wild","rabit":"domestic","duck":"domestic"}

A.del dic["Monkey "] B.dic["Monkey r"].delete()
C.delete(dic.[" Monkey "]) D.del(dic.[" Monkey "])

iv).What is the output of the following code [2]

```
aSet = {1, 'PYnative', ('abc', 'xyz'), True}
print(aSet)
```

A. {'PYnative', 1, ('abc', 'xyz'), True} B.TypeError
C. {'PYnative', 1, ('abc', 'xyz')} D.None

v). Select the correct output of the following String operations [2]

```
myString = "pynative"
stringList = ["abc", "pynative", "xyz"]
print(stringList[1] == myString)
print(stringList[1] is  myString)
```

A.true false B.true true C. false, false D.false,true

vi) What is the output of the following? [2]

```
print("Hello {1} and {0}".format('bin', 'foo'))
```

A. Hello foo and bin
B. Hello bin and foo
C. Error
D. None of the mentioned

vii). What is the output of the following? [2]

```
s1={5,7,2}
s1.add(7)
print(s1)
```

A. {2,5,7}
B. {5,7,2,7}
C. Error as there is no add function in set data type
D. Error as 7 already exist in the set

viii) What is the output of the following? [2]

```
d1={1:"ABC",2:"XYZ",3:"PQR"}
d1.clear()
print(d1)
```

A. {}
B. None
C. {1:None,2:None,3:None}
D.Type Error

ix) What command is used to insert 6 in a list "L" at 3rdposition ? [2]

A. L.insert(2,6)
B. L.insert(3,6)
C .L.add(3,6)
D. L.append(2,6)

x) What does the following code print to the console? [2]

```
hair_color = "blue"
if 3 > 2:
    if hair_color == "black":
        print("You rock!")
else:
    print("Boring")
```

A. blue
B. black
C. Boring
D. You rock

xi) What is the output of the following for loop and range() function [2]

```
for num in range(-2,-5,-1):
    print(num, end=", ")
```

A . -2, -1, -3, -4
B. -2, -1, 0, 1, 2, 3,
C. -2, -1, 0
D. -2, -3, -4,

xii) What will be the output of the following Python code? [2]

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

A. 0 1 2 3 0
B. 0 1 2 0
C. 0 1 2
D. error

xiii) Select the correct output of the following String operations [2]

```
str = "my name is James bond";
print (str.capitalize())
```

A. My Name Is James Bond
B. TypeError: unsupported operand type(s) for * or pow(): 'str' and 'int'
C. My name is james bond

D. none of these

xiv) What is the output of the following code [2]

```
str1 = "My salary is 7000";
str2 = "7000"
print(str1.isdigit())
print(str2.isdigit())
```

A. False True B. False False C. True False D.True True

xv) Suppose list1 is [4, 2, 2, 4, 5, 2, 1, 0], Which of the following is correct syntax for slicing operation? [2]

A. print(list1[0]) B. print(list1[:2])
C. print(list1[:-2]) D. all of the mentioned

**Q2.Solve any three out of four**

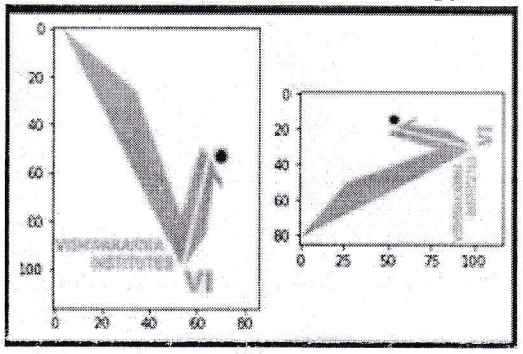
a) Describe broadcasting in NumPy, state different rules in broadcasting with example and code? [5]

b) Write a NumPy program to get the following expected output of an array values element-wise. [5]

arr1=[7,8,11]
arr2=[4,3,3]
Expected output
A = [2401 512 1331]
B= [3 2 2]

c) Differentiate between Python list and NumPy array? Write a code to create 1D,2D and 3D array [5]

d) Observe the output figure. Write a python code for obtaining this output. [5]



**Q3.Solve any three out of four**

a) Write a Python program to append text to a file and display the text [5]

Input file:

At the end of the day, whether or not those people are comfortable with how you're living your life doesn't matter. What matters is whether you're comfortable with it.

Append with following lines:

Life has got all those twists and turns. You've got to hold on tight and off you go.

b)Explain readline() and readlines() function. Write a python program to print the last two lines of a file [5]

Input file:

Nothing is impossible. The word itself says 'I'm possible!'
There is nothing impossible to they who will try.
Keep your face always toward the sunshine, and shadows will fall behind you.

c) Write the symbols and explain in detail the modes used in text file for the following operations. [5]

a) Read Only
b) Write only
c) Read and Write
d) Write and Read

What is the difference between write and append mode?

d) Write a python program to count 'the' and display the total number of lines from the file. [5]

Input file:

People tell you the world looks a certain way.
Parents tell you how to think. Schools tell you how to think.
TV. Religion. And then at a certain point, if you're lucky, you realize you can make up your own mind.
Nobody sets the rules but you. You can design your own life.