



# P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

**Fifth Semester, B.E. - Information Science and Engineering**

**Semester End Examination; Feb. - 2021**

**Python Programming (Technical Skills - I)**

Time: 2 hr.

Max. Marks: 50

### Course Outcomes

The Students will be able to:

CO1: Understand and comprehend the basics of python programming.

CO2: Understand and implement modular approach using python.

CO3: Learn and implement various data structures provided by python library including string, list, dictionary and its operations etc.

CO4: Understands the usage of Numpy libraries and to develop various applications of utilizing Numpy.

CO5: Ability to implement computing descriptive statics using pandas.

**Note: All questions are compulsory and each question carries TWO marks.**

Q. No.	Questions	BLs	COs	POs
1.	Which of the following statements is correct regarding the object oriented programming concept in python a) classes are real-world entities while objects are not real b) objects are real-world entities while classes are not real c) both objects and classes are real-world entities d) all of the above	L2	CO1	
2.	Which of the following operators is the correct option for power[ab] a) a^b      b) a**b      c) a^^b      d) a^*b	L3	CO1	
3.	How many times will the loop run <code>i = 2</code> <code>while(i &gt; 0):</code> <code>i = i - 1</code> a) 2      b) 3      c) 1      d) 0	L4	CO1	
4.	Which of the following will result in an error <code>Str1 = "python"</code> a) <code>print(str1[2])</code> b) <code>print(str1[0:9])</code> c) <code>str1[1] = "x"</code> d) both (b) and(c)	L4	CO1	
5.	Is python case sensitive when dealing with identifiers a) yes      b) no      c) machine dependent      d) none of the above	L2	CO1	
6.	What will be the output of below python code? <code>Str 1 = "Information"</code> <code>print(Str 1[2:8])</code> a) format      b) formation      c) orma      d) ormat	L4	CO2	
7.	Which of the following is the use of function in python? a) Functions are reusable pieces of program b) Functions dont provide better modularity for your application c) You can't create your own functions d) None of the above	L2	CO2	

8. Fill in the line of the following Python code for calculating the factorial of a number.
- ```
def fact(num):
    if num == 0:
        return 1
    else:
        return _____
```
- a) num\*(num-1)                      b) (num-1)\*(num-2)  
c) num\*fact(num-1)                  d) fact(num)\*fact(num-1)
- L3 CO2
9. Observe the following Python code, and find the output
- ```
def a(n):
    if n == 0:
        return 0
    else:
        return n*a(n - 1)
```
- ```
def b(n, tot):
    if n == 0:
        return tot
    else:
        return b(n-2, tot-2)
```
- a) Both a() and b() aren't tail recursive    b) Both a() and b() are tail recursive  
c) b() is tail recursive but a() isn't        d) a() is tail recursive but b() isn't
- L4 CO2
10. The function pow(x,y,z) is evaluated as:
- a) (x\*\*y)\*\*z    b) (x\*\*y) / z    c) (x\*\*y) % z    d) (x\*\*y)\*z
- L3 CO2
11. To Insert 6 to the third position in a given list [say t], we use which command?
- a) t.insert(3,6)    b) t.insert(2,6)    c) t.add(3,6)        d) t.append(3,6)
- L3 CO3
12. What will be the output of the following python code
- ```
>>> t1 = (1,2,3,4)
>>> t2 = (1,2,4,3)
>>> t1 < `t2
```
- a) TRUE        b) FALSE            c) ERROR            d) NONE
- L3 CO3
13. If t = (5,3,1,9,0) which of the following codes will give the same output?
- i) Print(t[:-1])    ii) Print(t[0:5])    iii) Print(t[0:4])    iv) Print(t[-4:])
- a) i , ii        b) ii , iv        c) i, iv            d) i, iii
- L4 CO3
14. What would be the output of the following code
- ```
d1 = {"abc":5, "def":6, "ghi":7}
print(d1[0])
```
- a) abc        b) 5            c) {"abc":5}        d) Error
- L4 CO3
15. What would be the output of the following code
- ```
L = [-2,4]
M = map[lamda x: x*2,1]
Print(M)
```
- a) [-4,16]        b) [-2,4]        c) ERROR            d) Address of M
- L4 CO3

16. What would be the output of the following code
- ```

Import numpy as np
A= np.array([1,2,3])
Print(A)

```
- a) ([1,2,3])      b) [1]      c) [1,2,3]      d) ERROR
17. How we can change the shape of the Numpy array in python?
- a) By Shape()      b) By reshape()      c) By ord()      d) By change()
18. How we install Numpy in the system?
- a) install numpy      b) pip install python numpy      c) pip install numpy      d) pip install numpy python
19. Numpy.array(list), what it does ?
- a) It convert array to list      b) It convert list to array      c) It convert array to array      d) Error
20. Shape() function in Numpy array is used to
- a) Find the shape of the array      b) Change the shape of the array      c) Both of the above      d) None of the above
21. Best way to import the pandas module in your program?
- a) import pandas      b) import pandas as p      c) from pandas import \*      d) All of the above
22. For what purpose a Pandas is used?
- a) To create a GUI programming      b) To create a database      c) To create a High level array      d) All of the above
23. What we pass in DataFrame in pandas?
- a) Integer      b) String      c) Pandas series      d) All of the above
24. Which of these is an invalid writer function in Pandas?
- a) to\_clipboard      b) to\_text      c) to\_stata      d) to\_msgpack
25. A series is a one-dimensional array which is labelled and can hold any data type.
- a) True      b) False