



Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

Bachelor of Vocation Degree Examination – January 2021

III Semester

Class : II B.Voc

Time: 3 Hours

Major : Artificial Intelligence and Machine Learning

Max. Marks: 100

19VAIC08 Advanced Python Programming

Part A

10 x 1 = 10

Choose the Correct Answer

1. Predict the output of the following program :

```
import re
sentence = 'horses are fast'
regex = re.compile('(P<animal>w+) (P<verb>w+) (P<adjective>w+)')
matched = re.search(regex, sentence)
print(matched.groupdict())
```

- a. {'animal': 'horses', 'verb': 'are', 'adjective': 'fast'}
- b. ('horses', 'are', 'fast')
- c. 'horses are fast'
- d. 'are'

2. Predict the output of the following code : print type(type(int))

- a. type 'int'
- b. type 'type'
- c. error
- d. 0

3. Predict the output of the following program:

```
i = 0
while i < 3:
print i
i++
print i+1
```

- a. 0 2 1 3 2 4
- b. 0 1 2 3 4 5
- c. Error
- d. 1 0 2 4 3 5

4. Identify which of these is not a core data type?

- a. Lists
- b. Dictionary
- c. Tuples
- d. Class

5. data = 50

```
try:
data = data/0
except ZeroDivisionError:
print('Cannot divide by 0 ', end = "")
else:
print('Division successful ', end = "")
try:
data = data/5
except:
print('Inside except block ', end = "")
else:
```

- a. Cannot divide by 0 GFG
- b. Cannot divide by 0
- c. Cannot divide by 0 Inside except block GFG
- d. Cannot divide by 0 Inside except block

```
6. data = 50
try:
    data = data/10
except ZeroDivisionError:
    print('Cannot divide by 0 ', end = "")
finally:
    print('GeeksforGeeks ', end = "")
else:
    print('Division successful ', end = "")
```

- a. Runtime error
- b. Cannot divide by 0 GeeksforGeeks
- c. GeeksforGeeks Division successful
- d. Geeks for Geeks

7. In which of the following field, we can put our Button?

- a. Window
- b. Frame
- c. Label
- d. All of the above

8. Minimum number of argument we pass in a function to create a rectangle using canvas tkinter?

- a. 2
- b. 4
- c. 6
- d. 5

9. What will be the output of the following Python code?

```
class A:
    def test(self):
        print("test of A called")
class B(A):
    def test(self):
        print("test of B called")
        super().test()
class C(A):
    def test(self):
        print("test of C called")
        super().test()
class D(B,C):
    def test2(self):
        print("test of D called")
obj=D()
obj.test()
```

- a. test of B called test of C called test of A called
- b. test of C called test of B called
- c. test of B called test of C called
- d. Error, all the three classes from which D derives has same method test()

10. What type of inheritance is illustrated in the following Python code?

```
class A():
    pass
class B():
    pass
class C(A,B):
    pass
```

- a. Multi-level inheritance
- b. Multiple inheritance
- c. Hierarchical inheritance
- d. Single-level inheritance

Part B**5 x 6 = 30****Answer ALL questions****Each answer should not exceed 400 words or two pages**

11.a. Write a Program to Prompt for a Score between 0.0 and 1.0. If the Score is out of range, print an error. If the score is between 0.0 and 1.0, print a grade using the following table

Score	Grade
≥ 0.9	A
≥ 0.8	B
≥ 0.7	C
≥ 0.6	D
< 0.6	F

(or)

11.b. Explain the types of inheritance supported in Python with examples.

12.a. Explain with an example exceptions with arguments in Python.

(or)

12.b. Appraise the use of try block and except block in Python with syntax.

13.a. How to create GUI with Python using dialog boxes? Explain.

(or)

13.b. Write short notes on GUI programming Toolkits.

14.a. Explain the Mysql database connectivity with Python.

(or)

14.b. How to update the data on database with Python? Explain.

15.a. Give an account on building CGI application.

(or)

15.b. Write short notes on helping servers process client data.

Part C**5 x 12 = 60****Answer ALL questions****Each answer should not exceed 800 words or four pages**

16.a. A theatre management system keeps track of the movies being played in the theatre, their timings and other details of the movie such as movie name, type(2d/3d), director_name etc. Ticket charges for 2d movies is Rs.120 and ticket charges for 3d movie is Rs.150. The system should have the facility to display the bill for the number of members. Tax amount for 2d movie is 20% and tax amount for 3d movie is 25%. Create Python classes, methods, constructors and attributes required for the above scenario.

(or)

16.b. Discuss polymorphism as implemented in Python programming language with an example. Write Python Program to Create a Class Called as Complex and Implement `__add__()` Method to Add Two Complex Numbers. Display the result by overloading the + Operator.

17.a. How to create and import the Python packages? Explain with an example.

(or)

17.b. Explain the various types of Exceptions with an example.

18.a. Create the GUI using python program for addition and subtraction of two numbers.

(or)

18.b. How to create GUI with checkbox and radio buttons using GUI Widgets with Tkinter.

19.a. Illustrate the types of databases used with Python.

(or)

19.b. How to insert and delete student data on student database? Explain it.

20.a. Write the Web programming to create Simple Web Client? Explain.

(or)

20.b. Write short notes:

(i) HTTP Servers.

(ii) CGI.
