Python Programming Multiple-choice Questions (MCQs) with answers

1. Which of the following is a correct syntax to output "Hello, World!" in Python?

A) print("Hello, World!")

B) echo("Hello, World!")

C) printf("Hello, World!")

D) echo("Hello World")

Answer: A

2. What is the correct file extension for Python files?

A) .pyth

B) .python

C) .py

D) .p

Answer: C

3. What is the result of 2 ** 3 in Python?

A) 8

B) 6

C) 5

D) 9

Answer: A

4. Which of the following data types is immutable in Python?

A) list

B) set

C) dict

D) tuple

Answer: D

5. What will be the output of the following code?

python

Copy code

```
x = [1, 2, 3]
x[0] = 10
print(x)
```

A) [1, 2, 3]

B) [10, 2, 3]

C) [1, 10, 3]

D) [10, 2, 3]

Answer: D

6. Which method can be used to add an element to a list in Python?

A) append()

B) insert()

C) extend()

D) All of the above

Answer: D

7. Which of the following statements is used to create a dictionary in Python?

A) dict = {}

B) dict = []

C) dict = ()

D) dict = ""

Answer: A

8. Which function can be used to get the type of an object in Python?

A) type()

B) get_type()

C) is_type()

D) object_type()

Answer: A

9. Which of the following is NOT a valid Python keyword?

A) False

B) True

C) if

D) elseif

Answer: D

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

python

Copy code

print(10 / 3)

A) 3.3333333333333335

B) 3

C) 3.0

D) 3.33

Answer: A

11. How can you create a function in Python?

A) function myFunc():

B) def myFunc():

C) create myFunc():

D) func myFunc():

Answer: B

12. What is the correct syntax to call a function myFunction() in Python?

A) myFunction()

B) call myFunction()

C) function myFunction()

D) myFunction.invoke()

Answer: A

13. Which of the following will remove all items from a list myList?

A) myList.clear()

B) myList.delete()

C) myList.remove_all()

D) myList.clear_all()

Answer: A

14. How can you generate a random number between 1 and 10 in Python?

A) random.randint(1, 10)

B) random.random(1, 10)

C) random.range(1, 10)

D) random.random()

Answer: A

15. What is the output of print(len("Python"))?

A) 5

B) 6

C) 7

D) None

Answer: B

16. Which of the following is the correct syntax for a while loop in Python?

A) while x < 5:

B) while (x < 5)

C) while x < 5 do:

D) while x < 5 then:

Answer: A

17. How do you handle exceptions in Python?

A) try...except

B) catch...throw

C) try...throw

D) handle...error

Answer: A

18. What is the output of print(2 + 3 * 4)?

A) 14

B) 20

C) 10

D) 12

Answer: A

19. Which of the following is used to define a block of code in Python?

A) {}

B) []

C) ()

D) Indentation (Spaces or Tabs)

Answer: D

20. Which method in Python is used to convert a string to an integer?

A) int()

B) string()

C) convert()

D) to_int()

Answer: A

21. What will be the output of print(5 // 2)?

A) 2.5

B) 2

C) 2.0

D) 3

Answer: B

22. Which of the following is used to create an empty set in Python?

A) set()

B) []

C) {}

D) empty_set()

Answer: A

23. Which Python keyword is used to exit a loop?

A) exit

B) break

C) end

D) return

Answer: B

24. How can you check if a variable x is a string?

A) isinstance(x, str)

B) type(x) == string

C) x is string

D) type(x) == str

Answer: A

25. How do you create a new class in Python?

A) class MyClass:

B) new class MyClass:

C) class: MyClass

D) define MyClass class

Answer: A

26. What is the output of print("Hello"[1])?

A) H

B) e

C) l

D) o

Answer: B

27. What is the default value of x if the following code is run?

python

Copy code

x = 10

def my_function(x = 5):

    print(x)

my_function()

A) 10

B) 5

C) None

D) Error

Answer: B

28. What will be the output of print(10 % 3)?

A) 3

B) 1

C) 0

D) 2

Answer: B

29. How do you create a tuple in Python?

A) my_tuple = [1, 2, 3]

B) my_tuple = (1, 2, 3)

C) my_tuple = {1, 2, 3}

D) my_tuple = <1, 2, 3>

Answer: B

30. Which function in Python is used to find the maximum element in a list?

A) max()

B) maximum()

C) find_max()

D) highest()

Answer: A

31. Which function is used to get input from the user in Python?

A) input()

B) read()

C) get()

D) get_input()

Answer: A

32. What is the default port number for a MySQL database?

A) 3306

B) 8080

C) 443

D) 5432

Answer: A

33. Which method removes an item from a list in Python by value?

A) remove()

B) pop()

C) delete()

D) discard()

Answer: A

34. What will be the output of the following code?

python

Copy code

x = "hello"

y = "world"

print(x + y)

A) hello world

B) helloworld

C) worldhello

D) Error

Answer: B

35. What is the result of 5 == 5 in Python?

A) True

B) False

C) None

D) Error

Answer: A

36. What is the function to sort a list in Python?

A) sort()

B) sorted()

C) order()

D) arrange()

Answer: A

37. What is the purpose of the __init__ method in a class?

A) It initializes the object of a class

B) It runs after the class is instantiated

C) It defines the attributes of a class

D) It is used to destroy the object

Answer: A

38. What is the result of x = 5; y = 10; print(x > y)?

A) True

B) False

C) 5

D) 10

Answer: B

39. What will be the output of the following code?

python

Copy code

```
print(3 * 'hi')
```

A) hi hi hi

B) hihihi

C) hi3

D) None

Answer: B

40. How can you iterate through a list in Python?

A) for item in list:

B) for item in list[]:

C) while item in list:

D) for item in range(list):

Answer: A

41. What is used to start a single-line comment in Python?

A) #

B) //

C) /*

D) <!--

Answer: A

42. What is the purpose of the else keyword in Python?

A) To execute code when a loop finishes

B) To define a function

C) To create a dictionary

D) To execute code when the condition of an if is False

Answer: D

43. Which statement will stop the execution of a function and return a value?

A) continue

B) return

C) break

D) exit

Answer: B

44. How can you check if a number is even in Python?

A) if number % 2 == 0:

B) if number / 2 == 0:

C) if number // 2 == 0:

D) if number ** 2 == 0:

Answer: A

45. How can you convert a string to lowercase in Python?

A) lower()

B) to_lower()

C) convert_lower()

D) string.lower()

Answer: A

46. How can you remove a key from a dictionary in Python?

A) remove(key)

B) del key

C) pop(key)

D) Both B and C

Answer: D

47. What is the purpose of the global keyword?

A) To define a global variable

B) To access a local variable from outside a function

C) To declare a variable in a global scope

D) To create a global function

Answer: C

48. How do you create a shallow copy of a list?

A) copy.copy(list)

B) list.copy()

C) list[:]

D) All of the above

Answer: D

49. How do you declare a constant in Python?

A) const x = 10

B) x = 10

C) x = 10; const

D) Python does not have a constant type

Answer: D

50. What is the function to find the length of an iterable in Python?

A) size()

B) length()

C) len()

D) count()

Answer: C

51. What is the output of following python code?

```python
true = 'false '

false = 'true '

true,false = false, false + true

print(true,false)
```

    A. true true false
    B.   false true false
    C.   program results into an error
    D.   true false

Correct Answer: A

52.What is the output of following python code?

```python
for i in range(0):

  print('Gold from Aalu')

else:

  print('Khatakhat Jalebi')
```

    A. Gold from Aalu
    B.   Khatakhat Jalebi
    C.   Error as if statement is missing
    D. Gold from Aalu
        Khatakhat Jalebi

Correct Answer: B

53.What is the output of following python code?

s1=' Party '

s2=' Bh '

s3=' Jan '

print("{1} + {0} = {2}".format(s2,s3,s1))

    A.

       Jan + Bh = Party

    B.

       Bh   + Jan = Party

    C.

       BhJan = Party

    D.

       JanBh = Party

Correct Answer: A

54.What is the output of following python code?

s1='Diwali Laddo '

s2='Phataake '

s3='Soda '

s4='Stop there'

print((s3+s2+s1+s4)[-13:-4:2])

A.

d tpt

B.

syntax error on the last line

C.

d Sph

D.

d oSo

Correct Answer: A

53. What is the output of following python code?

filmi_duniya = {'Rajesh Khanna': [16], 'Dharmendra' : [89]}

filmi_duniya['Rajesh Khanna'].append(72)

filmi_duniya['Vinod Khanna'] = filmi_duniya['Rajesh Khanna']

filmi_duniya['Vinod Khanna'].append(65)

print(filmi_duniya)

A. {'Rajesh Khanna': [16, 72, 65], 'Dharmendra': [89], 'Vinod Khanna': [16, 72, 65]}

B. {'Rajesh Khanna': [16, 72], 'Dharmendra': [89], 'Vinod Khanna': [16, 72, 65]}

C. {'Rajesh Khanna': [16, 72, 65], 'Dharmendra': [89], 'Vinod Khanna': [16, 72]}

D. Error

Correct Answer: A

55. What is the output of following python code?

```
duniya = {"bahar": {"andar": 1}}

andar_duniya = duniya["bahar"]

andar_duniya["andar"] = 2

duniya["bahar"]["r&d"] = 4

andar_duniya = {"r&d": 3}

print(duniya)
```

A. {'bahar': {'andar': 2, 'r&d': 4}}

B.   {'bahar': {'andar': 1, 'r&d': 4}}

C.   {'bahar': {'andar': 2, 'r&d': 3}}

D.   Error

Correct Answer: A

56.

What is the output of following python code?

slogan1=['Intel', 'Core']

slogan1.extend('AMD')

slogan1.append('Ryzen')

print(slogan1)

A.   ['Intel', 'Core', 'A', 'M', 'D', 'Ryzen']

B.   ['Intel', 'Core', 'AMD', 'Ryzen']

C.   ['Intel', 'Core', 'A', 'M', 'D', 'R', 'y', 'z', 'e', 'n']

D.   Error

57. What is the output of following python code?

picture=[(5, 21),(20, 18), (10, 50)]

unknown=list(map(lambda x : x[1] + 10, picture))

print(unknown)

    A.   [31, 28, 60]

    B.   [15, 25, 20]

    C.   [(5,31), (20,28), (10, 60)]

    D.   [(15,21), (25,18), (20, 50)]

Correct Answer: A

58.How do you create an anonymous function in Python?

A.   Using def keyword

B.   Using lambda keyword

C.   Using anofunc keyword

D.   Using ternary operator ?:

Correct Answer: B

59.You have been given a python module named as gadbad as it is a very huge module, and it has a function named as quest.Which of the statement given below will import only function quest from gadbad module.

A.   import gadbad.quest

B.   import quest from gadbad

C.   from gadbad import quest

D.   from gadbad import *

Correct Answer: C

60.What is the output produced by the print statement?

```python
def mushkil(x, y=[]):

    y.append(x)

    return y


y=['Infra','Trade']

mushkil('GDP',y)

print(mushkil('Aalu-Sona'))
```

A.
['Infra', 'Trade', 'GDP', 'Aalu-Sona']

B.
['Infra', 'Trade', 'GDP']

C.
['Aalu-Sona']

D.
['Infra', 'Trade', 'GDP']

['Aalu-Sona']

61. What is the output of following python code?

```
bhaiya='fasonge'

def maare_jaaonge():

    bhaiya="fas gaye"

    def chakkar():

       nonlocal bhaiya

        bhaiya="loot gaye"

    chakkar()

    print(bhaiya)


maare_jaaonge()
```

    A.   'fasonge'
    B.   'fas gaye'
    C.   'loot gaye'
    D.   Error in nonlocal statement

Correct Answer: C

62. What is the output of the following python code?

```
from math import sqrt

i=25

sqrt_i=math.sqrt(i)
```

A.
   Error

B.
   -5

C.
   (+5, -5)

D.
   5

Correct Answer: A

63.What is the output of following python code?

```
topi = (4, (2, 1, 5), 1)

p, (q, *r), s = topi

print(p, q, r, s)
```

A.

   4 [2 1 5] 1

B.

   4 2 1 5 1

C.

   4 2 [1, 5] 1

D.

   Error on the line prior to print statement

Correct Answer: C

64.What can be expected from the following python code?

subji = ([1, 2], 3)

subji[0].append(4)

subji[1].append(5)

print(subji)

A.

   ([1, 2], 4, 3, 5)

B.

([1, 2, 4], 3, 5)

C.

([1, 2], 3, 4, 5)

D.

Error

Correct Answer: D

65. What does the 'self' keyword represent in Python classes?

A.

A reference to the class

B.

A reference to the current instance of the class

C.

A reference to the parent class

D.

A reference to a global variable

Correct Answer: B

66. What is the output produced by the following python code?

```python
def inflation(factor):

    def diwali(func):

        def shanti(*args, **kwargs):

            result = func(*args, **kwargs)

            return result ** factor

        return shanti

    return diwali


@inflation(2)
def add(a, b):

    return a + b


print(add(3, 5))
```

A.
   8

B.
   Error

C.
   16

D.

64

Correct Answer: D

67. What is the purpose of the super() function in Python?

A.

To access private methods

B.

To define a class

C.

To access methods from the parent class

D.

To create an instance of the current class

Correct Answer: C

68. What is the output of the following python code?

import re

pattern=r".*?"

string="fail"

matches=re.findall(pattern,string)

print(matches)

A.

['', 'f', '', 'a', '', 'i', '', 'l', '']

B.

['f', 'a', 'i', 'l']

C.

['', 'f', '', 'a', '', 'i', '', 'l']

D.

['', 'f', 'a', 'i', 'l', '']

Correct Answer: A

69.

What will be the output of the following code?

```
class Animal:
    def sound(self):
        print("Some sound")

class Dog(Animal):
    def sound(self):
        print("Bark")

dog = Dog()
dog.sound()
```
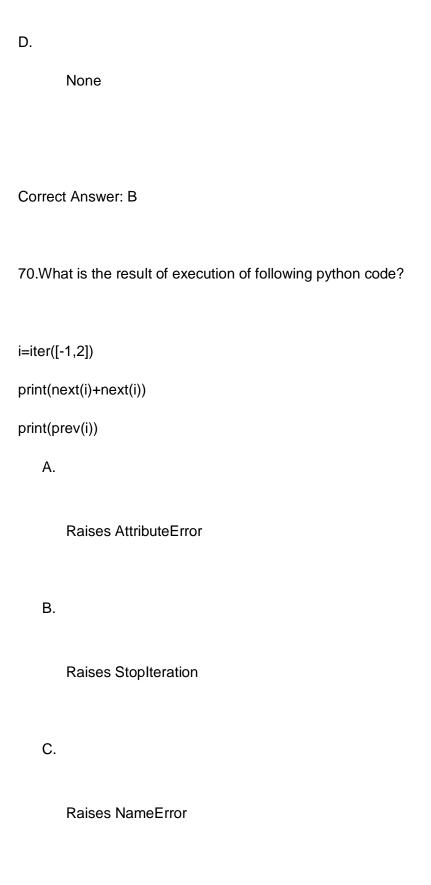
A.

Some sound

B.

Bark

C.

Error

D.

None

70.What is the result of execution of following python code?

i=iter([-1,2])

print(next(i)+next(i))

print(prev(i))

A.

Raises AttributeError

B.

Raises StopIteration

C.

Raises NameError

D.

Raises TypeError

Correct Answer: C

71.Will the following code execute without errors and if so what will be printed?

```
try:
    raise MemoryError("Beauty is a function of time")
except MemoryError as e:
    print(f"Caught MemoryError: {e}")
    raise
except Exception as e:
    print(f"You are smart : {e}")
finally:
    print("Handle me carefully")
```

A.
Caught MemoryError: Beauty is a function of time

Handle me carefully

B.

Caught MemoryError: Beauty is a function of time

Handle me carefully

MemoryError: Beauty is a function of time

C.

Caught MemoryError: Beauty is a function of time

Handle me carefully

You are smart : Beauty is a function of time

D.

Error

Correct Answer: D

72. It has been found by CDAC's R&D organization that the hypersonic missile test which was conducted last week succeeded in hitting the target whose coordinates were not changed after the missile launch. However, the missile failed to hit the target when the target coordinates were changed after its launch.

The investigation revealed that it was the performance issue of a python module trajic.py written for new trajectory computation using the python's primarily list data structure. It was also clarified that it won't be possible to add any more weight to the missile payload by means of installing additional memory or a heavier CPU to increase the performance. Think and choose the best recommendation?

A.

Nothing can be done, use the missile as it is and don't change the target coordinates after its launch or seek help from CDAC to use MATLAB in rewriting trajic.py code.

B.

Use pandas to rewrite the trajic.py

C.

Use scipy to rewrite the trajic.py

D.

Use numpy to rewrite the trajic.py

Correct Answer: D

73.What is the default index type of a DataFrame in Pandas?

A.

Integer index

B.

String index

C.

Float index

D.

DateTime index

Correct Answer: A

74.How can you find the summary statistics (like mean, std, min, etc.) of numeric columns in a DataFrame?

A.

df.summary()

B.

df.stats()

C.

df.describe()

D.

df.statistics()

Correct Answer: C

75.Which statement is the most correct for converting an Image into NumPy array using PIL and NumPy?

A.

Image must be in RGB format for converting into an NumPy array.

B.

Image must be in CMYK format for converting into an NumPy array.

C.

No conversion of images is required for it to be turned into an NumPy array.

D.

convert() method is available in Image class for image format conversion.

Correct Answer: C

76.What is the output of the following python code?

```
import pandas as pd
d={'Munna': 1, 'Munni': 1, 'Bachcha': 3}
s=pd.Series(d)
r=s[['Munna', 'Bachcha']] + 1
print(r.tail(3).head(2).tail(1))
```
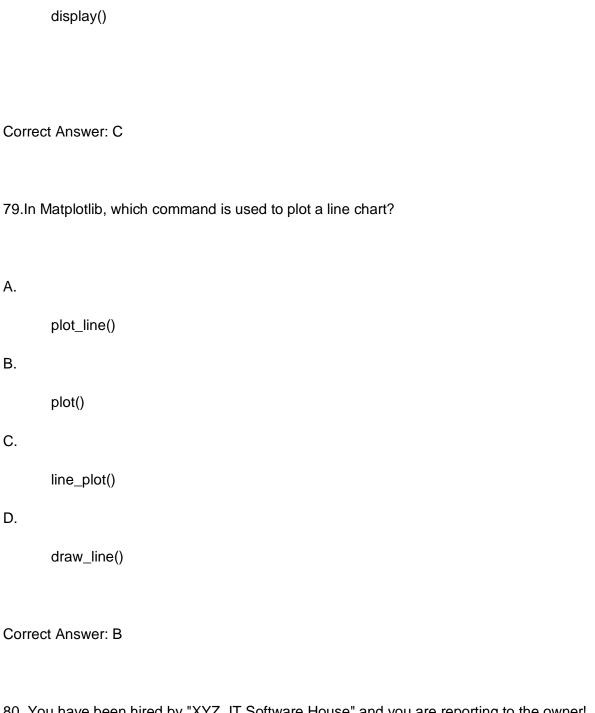
A.

Bachcha   4

dtype: int64

B.

Munna   2

dtype: int64

C.

Bachcha   3

dtype: int64

D.

JMunni   2

dtype: int64anBh = Party

Correct Answer: A

77.

What is the output of the following python code?

```python
import numpy as np
ar=np.array([41, 42, 43, 44])
x=ar % 4 == 0
nar=ar[x]
print(nar)
```

A.

[44]

B.

44

C.

[42, 44]

D.

Error

Correct Answer: A

78.Which of the following functions in Matplotlib is used to display a plot?

A.

show_plot()

B.

render()

C.

show()

D.

display()

Correct Answer: C

79.In Matplotlib, which command is used to plot a line chart?

A.

　　plot_line()

B.

　　plot()

C.

　　line_plot()

D.

　　draw_line()

Correct Answer: B

80. You have been hired by "XYZ IT Software House" and you are reporting to the owner! Owner has got you three different software development projects to be developed using two different versions of python and different versions of numpy, pandas libraries and has insisted that you will not get any other resources other than your existing laptop true to the Company's Name and its policies!!

Which set of commands is the best option to move forward in order to setup the different projects on your laptop?

A.

python3 -m venv <env_name>

execute the activate script using the underlying OS command

Linux/MAC OS:: source <env_name>/bin/activate

MS Windows :: <env_name>\Scripts\activate

B.

Use virtual machine software like VirtualBox, VMware, etc. and setup your individual projects in different virtual machines so to avoid software conflicts.

C.

pyenv virtualenv <python_version> <env_name>

activate <env_name>

D.

conda create --name <env_name> python=<version>

conda activate <env_name>

Correct Answer: D

81.You have been an excellent Python developer known for having delivered multiple projects in last 2 weeks and as such you are receiving many calls to fix the bugs in these projects every day!! How will you manage your work. Choose the best option.

A.

Create a virtual machine for each project's environment on the laptop and shuffle between these virtual machines to fix the bugs as and when they are reported to you.

B.

Create a virtual machine for each project's environment on the development server for better response and shuffle between these virtual machines to fix the bugs as per the project.

C.

Create Python Virtual environment on the laptop and execute it's "activate" script to make the environment available for bug fixes and once it is done you switch over to the next project environment by executing its "activate" script. The reason being execution of activate script of a virtual python environment deactivates previously activated virtual python environment.

D.

Create Python Virtual environment on the laptop and activate all the project environments by executing their respective activate script and shuffle interactively between these environments to fix the bugs.

Correct Answer: D

82. You have visited the "XYZ Software House" recently in connection with a project. They use open-source Office software and most of their data resides in open-source based standards for spreadsheets. The owner is interested in looking at the statistical analysis of the data graphically. Which tool/library would you use with python? Choose the best option.

A.

Matplotlib

B.

Seaborn

C.

plotly

D.

ggplot2

Correct Answer: B

83.What is the output of the following python code?

```python
import sqlite3

con=sqlite3.connect("safachat.db")

c=con.cursor()

c.execute("BEGIN;")

c.execute("CREATE TABLE IF NOT EXISTS Missiles (id INTEGER PRIMARY KEY, name TEXT);")

c.execute("INSERT INTO Missiles (name) VALUES ('Hypersonic')")

c.execute("UPDATE Missiles SET name = 'Nuclear' WHERE id = 1;")

c.close()

d=con.cursor()

d.execute("SELECT * FROM Missiles;")

r=c.fetchall()

print(r)

d.close()
```

A.
   (1, 'Nuclear')

B.
   (1, 'Hypersonic')

C.
   (1, 'Hypersonic')

(2, 'Nuclear')

D.

Error

Correct Answer: D

84.Which one is a primary feature of R programming?

A.

It is primarily used for creating websites.

B.

It is primarily used for backend development.

C.

It is designed for performing and visualizing statistical analysis.

D.

It is used for creating mobile applications.

Correct Answer: C

85.Which command is used in R to install a package?

A.

install()

B.

install.package()

C.

install.packages()

D.

add.package()

Correct Answer: C

86. What is the name of the package repository for R?

A.

CRAN (Comprehensive R Archive Network)

B.

GitHub

C.

RHub

D.

Bioconductor

Correct Answer: A

87.Which of the following is used to store multiple data types in a single object in R?

A.

Data frame

B.

Matrix

C.

Array

D.

Vector

Correct Answer: A

88.What function is used to remove missing values from a data frame in R?

A.

remove.na()

B.

drop.na()

C.

na.omit()

D.

omit()

Correct Answer: C

89.Which R package is used to parse and work with JSON data retrieved from a website?

A.

jsonlite

B.

rvest

C.

xml2

D.

httr

Correct Answer: A

90. What will be the output of the following code?

x = 10

```
print(x == 10 and x != 5)
```

A.

True

B.

False

C.

None

D.

Error

Correct Answer: A

91.Which of the following is used for decision-making in Python?

A.   Loop

B.   If-else

C.   Function

D.   Class

Correct Answer: B

92.What is the result of len("Python")?

A.

6

B.

5

C.

Error

D.

0

Correct Answer: A

93. What is the output of "Python"[::-1]?

A.

nohtyP

B.

nothPy

C.

Error

D.

None

Correct Answer: A

94. Which method removes a key-value pair from a dictionary?

A.

remove()

B.

discard()

C.

pop()

D.

delete()

Correct Answer: C

95. What happens if a key doesn't exist when using the get() method?

A.

Throws an Error

B.

Returns None

C.

Returns 0

D.

Creates a new key-value pair

Correct Answer: B

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

```
my_list = [1, 2, 3]

my_list.extend([4, 5])

my_list[2:4] = [6, 7]

print(my_list)
```

A.
   [1, 2, 6, 7, 5]

B.
   [1, 2, 3, 7, 4, 5]

C.
   [1, 2, 3, 6, 7]

D.
   [1, 2, 6, 7, 4, 5]

Correct Answer: A

97. What will be the my_list output?

my_list = [1, 2, 3];

my_list[1] = 5

print(my_list)

A.
   [1, 2, 3]

B.

Error

C.

[1,5,3]

D.

[1,3,5]

Correct Answer: C

98. What does the return statement in a function do?

A.

Ends the function

B.

Specifies the output of the function.

C.

Returns control to the caller.

D.

All the mentioned options

Correct Answer: D

99. What is the purpose of a lambda function in Python?

A.

To define a class.

B.

To define an anonymous function.

C.

To create a generator.

D.

To handle exceptions.

Correct Answer: B

100. What will the following code output?

```
x = [1, 2, 3]

print(type(str(dir(x))))
```

A.

<class 'str'>

B.

<class 'list'>

C.

['1', '2', '3']

D.

<class 'type'>

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

```python
for i in range(3):
    for j in range(3):
        if j == 1:
            break
        print(i, j,end=" ")
```

A.

0 1 1 1 2 1

B.

0 1 1 1 1 2

C.

0 2 1 2 2 2

D.

0 0 1 0 2 0

102. What does the continue statement do?
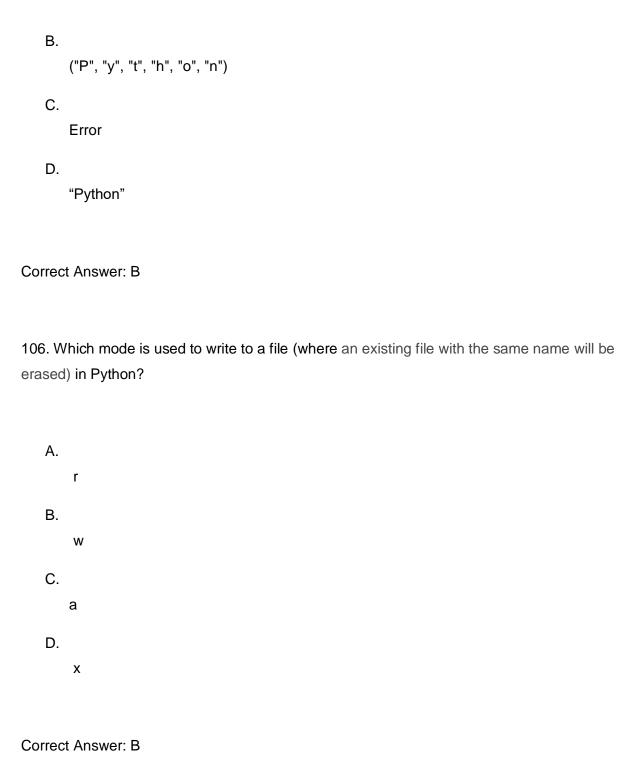
A.

Skips the loop iteration.

B.

Ends the loop.

C.

Restarts the loop.

D.

Executes the loop condition again.

Correct Answer: A

103. What does this code do?

import pickle

data = {'a': 1, 'b': 2}

with open('data.pkl', 'wb') as f:

pickle.dump(data, f)

A.

It serializes and writes the data dictionary to a file

B.

It reads data from data.pkl

C.

It deserializes data from a file

D.

It prints the contents of the data dictionary.

Correct Answer: A

104. Which of the following is TRUE about tuples?

A.

They are mutable.

B.

Their elements cannot be accessed by index.

C.

They can be concatenated.

D.

They do not support slicing.

Correct Answer: C

105. What is the output of tuple("Python")?

A.

["P", "y", "t", "h", "o", "n"]

B.

("P", "y", "t", "h", "o", "n")

C.

Error

D.

"Python"

Correct Answer: B

106. Which mode is used to write to a file (where an existing file with the same name will be erased) in Python?

A.

r

B.

w

C.

a

D.

x

Correct Answer: B

107. What does the "with" statement do in file handling?

A.

Opens multiple files.

B.

Creates a new file.

C.

Closes the file automatically.

D.

Remove files

Correct Answer: C

108. What is the purpose of the __init__ method within a class?

A.

To create a class attribute.

B.

To override methods.

C.

To implement inheritance.

D.

To initialize instance variable attributes.

Correct Answer: D

109. What is method overriding?

A.

Modifying a parent method in a subclass.

B.

Overriding a class definition

C.

Replacing a class method with a global method.

D.

Restricting modification in method in subclass

Correct Answer: A

110. Which of the following statements is true about decorators in Python?

A.

A decorator is used to define new classes.

B.

A decorator is always applied directly to the class constructor.

C.

Decorators in Python are used only with regular expressions.

D.

A decorator can modify the behavior of a function or method without changing its source code.

Correct Answer: D

111. What is the primary purpose of data hiding in object-oriented programming?

A.

To restrict access to a class's private attributes and methods.

B.

 To allow inheritance between classes.

C.

To declare variables inside methods only.

D.

To ensure all class attributes are public and can be accessed freely.

Correct Answer: A

112. What does the try block do in Python?

A.

Skips exceptions.

B.

Handles exceptions.

C.

Executes code that might throw an exception.

D.

Stops the program on errors.

113. What will the following code output?

```
try:

    x = 1 / 0

except ZeroDivisionError:

    print("Cannot divide by zero")
```

A.

Error

B.

Cannot divide by zero

C.

None

D.

0

114. In Pandas, what is the primary difference between apply() and map() methods?

A.

apply() is used for DataFrame columns only, while map() is used only for Series.

B.

map() applies functions element-wise, while apply() can apply functions row-wise or column-wise.

C.

apply() modifies the original DataFrame, while map() creates a copy.

D.

map() is faster than apply() for large DataFrames.

Correct Answer: B

115. Which method is used to remove duplicate rows in a DataFrame?

A.

drop_duplicates()

B.

remove_duplicates()

C.

drop_duplicates_rows()

D.

delete_duplicates()

Correct Answer: A

116. What does the numpy.zeros ((2,3)) function do?

A.

Creates a 2x3 matrix of ones.

B.

Creates a 3x2 matrix of zeros.

C.

Creates an empty array.

D.

Creates a 2x3 matrix of zeros.

Correct Answer: D

117. What is the output of numpy.array([1, 2, 3]) * 2?

A.

[1, 2, 3, 1, 2, 3]

B.

[2, 4, 6]

C.

Error

D.

[2, 4, 9]

Correct Answer: B

118.In NumPy, which of the following operations would not be possible on a matrix with non-numeric data types?

A.

Matrix addition

B.

Matrix transposition

C.

Sorting elements

D.

Element-wise multiplication

Correct Answer: D

119. Which Pandas method is used to handle missing data?

A.

fill()

B.

drop()

C.

fillna()

D.

null()

Correct Answer: C

120. What does the plot() function in Matplotlib do?

A.

   Creates a bar chart.

B.

   Plots a pie chart.

C.

   Plots data points on a graph.

D.

   Plots a histogram

Correct Answer: C

121. What does the hue parameter do in Seaborn plots?

A.

   Changes the plot's color scheme.

B.

   Differentiates data points by a third variable

C.

   Groups data into clusters.

D.

   Sets the background color.

Correct Answer: B

122. Which method in the Pillow library is used to resize an image?

A.

resize_image()

B.

resize()

C.

adjust()

D.

shape()

Correct Answer: B

123. What does the cursor.execute() method do in database programming?

A.

Opens a database.

B.

Closes the database connection.

C.

Runs SQL commands.

D.

Fetches all data from the table

Correct Answer: C

124. Which of the following is TRUE about R programming?

A.

It is used only for web development.

B.

It cannot handle data visualization.

C.

It is primarily used for statistical computing and graphics.

D.

It is not open-source.

Correct Answer: C

125. What is the command to install a package in R?

A.

install.package()

B.

install.packages()

C.

package.install()

D.

installing.package()

126. What is the data frame in R?

A.

A collection of lists

B.

A collection of matrices.

C.

A collection of vectors with the same data type.

D.

A tabular data structure

127. Which function is used to read a CSV file in R?

A.

read.csv()

B.

reader_csv()

C.

csv.read()

D.

data.read()

Correct Answer: A

128. What does the merge() function do in R?

A.

Adds a new column to a data frame.

B.

Exports data to a file.

C.

Combines two data frames based on common columns.

D.

Delete all rows.

Correct Answer: C

129. Which tool in R is used for creating interactive reports?

A.

R Script

B.

R Notebook

C.

ggplot2

D.

R Markdown

Correct Answer: D

===========================Some more MCQS================

Q. No. 1

Question:

What is the primary purpose of Matplotlib?

A. Data analysis

B. Data visualization

C. Machine learning

D. Web development

Correct Answer: B

Q. No. 2

Question:

Which of the following is a mutable data type in Python?

A. Tuple

B. List

C. String

D. Integer

Correct Answer: B

Q. No. 3

Question:

What keyword is used to define a function in Python?

A. def

B. func

C. function

D. define

Correct Answer: A

Q. No. 4

Question:

Which built-in function can be used to get the length of a list?

A. length()

B. len()

C. size()

D. count()

Answer: B

Q. No. 5

Question:

What is the correct syntax for a comment in Python?

A. // This is a comment

B. # This is a comment

C. /* This is a comment */

D. -- This is a comment

Answer: B

Q. No. 6

Question:

Which of the following statements will raise an error?

A. x = 10

B. y = 5.5

C. z = "Hello"

D. a = [1, 2, 3, 4, 5, ,6, 7, 8, 9, 10, 11]

Answer: D

Q. No. 7

Question:

What will be the output of the following code?

print(type([]))

A. list

B. tuple

C. dict

D. set

Answer: A

Q. No. 8

Question:

What will be the output of print("Hello"[1])?

A. H

B. e

C. l

D. o

Answer: B

Q. No. 9

Question:

Which of the following methods can be used to add an element to a list in Python?

A. add()

B. append()

C. update()

D. index()

Answer: B

Q. No. 10

Question:

Which of the following is used to handle exceptions in Python?

A. try-catch

B. try-except

C. catch-except

D. handle-except

Answer: B

Q. No. 11

Question:

What will print("A" * 3) output?

A. AAA

B. A3A3A3

C. A3

D. Error

Answer: A

Q. No. 12

Question:

Which of the following methods can be used to remove an element from a list?

A. remove()

B. del

C. pop()

D. All of the mentioned

Answer: D

Q. No. 13

Question:

What will print(3 == 3.0) output?

A. True

B. False

C. Error

D. None

Answer: A

Q. No. 14

Question:

Which of the following is not a keyword in Python?

A. if

B. for

C. in

D. none

Answer: D

Q. No. 15

Question:

What is the purpose of the pass statement in Python?

A. To terminate a loop

B. To create a placeholder

C. To exit from a function

D. To ignore an error only

Answer: B

Q. No. 16

Question:

Which function can be used to convert a string to an integer?

A. int()

B. str()

C. float()

D. convert()

Answer: A

Q. No. 17

Question:

What will be the output of the following code? print([1, 2, 3] + [4, 5])

A. [1, 2, 3, 4, 5]

B. [1, 2, 3, [4, 5]]

C. Error

D. [1, 2, 3, 4, 5, 6]

Answer: A

Q. No. 18

Question:

Which of the following will correctly create a set in Python?

A. {1, 2, 3, 4}

B. set(1, 2, 3, 4)

C. [1, 2, 3, 4]

D. (1, 2, 3, 4)

Answer: A

Q. No. 19

Question:

What will the following code output?

print(bool(0))

A. True

B. False

C. Error

D. None

Answer: B

Q. No. 20

Question:

What is the output of the following code?

print({1, 2, 3} - {2})

A. {1, 3}

B. {2}

C. {1, 2, 3}

D. Error

Answer: A

Q. No. 21

Question:

Which of the following is the correct syntax for list comprehension?

A. [expression for item in iterable]

B. {expression for item in iterable}

C. (expression for item in iterable)

D. expression in [item for iterable]

Answer: A

Q. No. 22

Question:

Which of the following statements is true?

A. Lists can contain duplicate elements, sets cannot.

B. Sets can contain duplicate elements, lists cannot.

C. Both Lists and sets can contain duplicate elements.

D. Neither Lists nor sets can contain duplicate elements.

Answer: A

Q. No. 23

Question:

Which statement correctly creates a lambda function?

A. f = lambda x: x + 1

B. f = (def x: x + 1)

C. f = def lambda x: x + 1

D. f = lambda x -> x + 1

Answer: A

Q. No. 24

Question:

What is the output of the following code?

print({x: x**2 for x in range(3)})

A. {0: 0, 1: 1, 2: 4}

B. {0: 0, 1: 1, 2: 2}

C. {0: 0, 1: 1, 2: 3}

D. Error

Answer: A

Q. No. 25

Question:

What will be the output of the following code?

```
def add(a, b=5):
    return a + b
print(add(3))
```

A. 3

B. 5

C. 8

D. Error

Answer: C

Q. No. 26

Question:

How do you import a module in Python?

A. include module_name

B. import module_name

C. using module_name

D. load module_name

Answer: B

Q. No. 27

Question:

Which of the following can be used to check the type of an object?

A. typeof()

B. type()

C. checktype()

D. None of the above

Answer: B

Q. No. 28

Question:

What does the with statement do in Python?

A. It creates a loop

B. It handles exceptions

C. It simplifies file operations like close()

D. It defines a function

Answer: C

Q. No. 29

Question:

What does the continue statement do in a loop?

A. Exits the loop

B. Skips the current iteration

C. Breaks the loop

D. None of the above

Answer: B

Q. No. 30

Question:

Which of the following commands will display the plot?

A. plt.show()

B. plt.display()

C. plt.render()

D. plt.draw()

Answer: A

Q. No. 31

Question:

Which function is used to create an array filled with zeros in NumPy?

A. np.zeros()

B. np.empty()

C. np.fill()

D. np.zeros_like()

Answer: A

Q. No. 32

Question:

What will the following code output?

```
import pandas as pd

data = {'Name': ['Alice', 'Bob', 'Charlie'], 'Age': [25, 30, 35]}

df = pd.DataFrame(data)

print(df['Age'].mean())
```

A. 25

B. 30

C. 35

D. 32.5

Answer: D

Q. No. 33

Question:

What will be the output of the following code?

```
my_list = [1, 2, 3]

print(my_list[0:2])
```

A. [1, 2]

B. [1, 2, 3]

C. [2, 3]

D. Error

Answer: A

Q. No. 34

Question:

What is the primary purpose of the Pandas library?

A. Data visualization

B. Data manipulation and analysis

C. Machine learning

D. Web development

Answer: B

Q. No. 35

Question:

What does the global keyword do?

A. Defines a new variable

B. Allows a variable to be accessed globally

C. Declares a constant

D. None of the mentioned

Answer: B

Q. No. 36

Question:

Which of the following is not a valid way to open a file in Python?

A. open("file.txt")

B. open("file.txt", "r")

C. open("file.txt", "w+")

D. open("file.txt", "read")

Answer: D

Q. No. 37

Question:

What does the map() function do?

A. Applies a function to all items in an iterable

B. Creates a mapping of two lists

C. Filters items from a list

D. Applies a function to selected items in an iterable

Answer: A

Q. No. 38

Question:

Which operator can be used to check if two variables refer to the same object?

A. ==

B. !=

C. is

D. in

Answer: C

Q. No. 39

Question:

What is the purpose of the break statement?

A. To exit the current function

B. To exit a loop

C. To skip to the next iteration of a loop

D. To pause execution

Answer: B

Q. No. 40

Question:

What will be the output of the following code?

x = [1, 2, 3]

y = x

y[0] = 99

print(x)

A. [1, 2, 3]

B. [99, 2, 3]

C. [2, 3, 99]

D. Error

Answer: B

Q. No. 41

Question:

What is the output of the following code?

my_list = [1, 2, 3, 4, 5]

print(my_list[::2])

A. [1, 2, 3]

B. [1, 3, 5]

C. [2, 4]

D. [1, 2, 3, 4, 5]

Answer: B

Q. No. 42

Question:

Which function is used to serialize an object in Python?

A. dump()

B. save()

C. json()

D. serialize()

Answer: A

Q. No. 43

Question:

Which of the following can be used as a key in a dictionary?

A. List

B. Tuple

C. Set

D. Dict

Answer: B

Q. No. 44

What is the output of the following code?

x = 10

def my_func():

   global x

  x += 5

my_func()

print(x)

A. 10

B. 15

C. 5

D. Error

Answer: B

Q. No. 45

Question:

Which of the following statements is true about the sorted() function?

A. It modifies the original list.

B. It returns a new sorted list.

C. It can only sort lists.

D. It can only sort tuples.

Answer: B

Q. No. 46

Question:

What is the correct way to establish a connection to a MySQL database using mysql.connector?

A. connection = mysql.connector.connect(user='username', password='password', host='localhost', database='dbname')

B. connection = mysql.connect(user='username', password='password')

C. connection = mysql.connector.create_connection(user='username', password='password')

D. connection = mysql.connector.open(user='username', password='password')

Answer: A

Q. No. 47

Question:

Which command is used to execute a SQL query in Python after establishing a connection to a MySQL database?

A. execute()

B. run()

C. query()

D. perform()

Answer: A

Q. No. 48

Question:

How can you retrieve data from a MySQL database using Python?

A. By using fetchone() or fetchall() methods

B. By using get() method

C. By using read() method

D. By using retrieve() method

Answer: A

Q. No. 49

Question:

Which function is used to concatenate two or more arrays in NumPy?

A. np.append()

B. np.concatenate()

C. np.extend()

D. np.merge()

Answer: B

Q. No. 50

Question:

What will be the output of the following code?

```
import numpy as np
arr = np.array([1, 2, 3, 4])
arr[0] = 10
```

print(arr)

A. [1, 2, 3, 4]

B. [10, 2, 3, 4]

C. [1, 10, 3, 4]

D. Error

Answer: B

Q. No.51

Which of the following is the correct way to import sqrt() function from the math module?

A.

from math import sqrt

B.

from math import sqrt()

C.

import sqrt from math

D.

import sqrt() from math

Correct Answer: A

Q. No.22

What will be the output of the following code?

x = "CDAC"

print(x[1:])

A.

   DAC

B.

   CDA

C.

   CDAC

D.

   AC

Correct Answer: A

Difficulty Level: Intermediate

Q. No.53

What keyword is used to define an anonymous function in Python programming?

A. def

B. lambda

C. function

D. method

Correct Answer: B

Q. No.54

How do you open a file for reading in Python?

A. open("file.txt", "r")

B. open("file.txt", "w")

C. open("file.txt","x")

D. open("file.txt","a")

Correct Answer: A

Q. No.55

Which of the following data types is mutable in Python?

A.
  list

B.
  numbers (int and float)

C.
  string

D.
  tuple

Correct Answer: A

Q. No.56

How do you create a dictionary in Python?

A.

   my_dict = {}

B.

   my_dict = []

C.

   my_dict = ()

D.

   my_dict = <>

Correct Answer: A

Q. No.57

What will be the output of the following code?

x = [1, 2, 3]

y = x

y.append(4)

print(x)

A. [1, 2, 3]

B. [1, 2, 3, 4]

C. [4]

D. Error

Correct Answer: B

Q. No.58

What does the self parameter in a class method refer to?

A. The class itself

B. The current instance of the class

C. The method itself

D. class constructor

Correct Answer: B

Q. No.59

Which of the following is the correct syntax for defining a derived class in Python?

A. class DerivedClass inherits BaseClass:

B. class DerivedClass(BaseClass):

C. class DerivedClass extends BaseClass:

D. class DerivedClass implements BaseClass:

Correct Answer: B

Q. No.60

What does the map() function do in Python?

A. Applies a function to all items in an iterable and returns a list of results

B. Combines two lists into a single list

C. Filters items from an iterable based on a condition

D. Sorts an iterable

Correct Answer: A