PYTHON
Objective Practise Questions

Q1. How can we create an iterator object from a list?

Ans:- Bypassing the given list to the iter() function

Q2. If the function contains at least of one “yield” statement, then it becomes _____

Choose one

Ans:- a generator function

Q3. What is the output of the code?

```
1. mylist = [1, 3, 6, 10]
2.   a = (x**2 for x in mylist)
3.   print(next(a), next(a))
```

Ans:- 1 9

Q4. What are the criteria that must be met to create closure in Python?

Ans:- The program Must have the function inside the function.

Q5. What is the output of the code?

```
1. def Foo(n):
2.     def multiplier(x):
3.         return x * n
4.     return multiplier
5.
6. a = Foo(5)
7. b =
Foo(5) 8.
9.  print(a(b(2)))
```

Ans:- 25.

Q6. What is the output of the code?

```
1. def make_pretty(func):
2.     def inner():
3.         print("I got decorated")
4.         func()
5.     return inner
6.
7. def ordinary():
8.     print("I am ordinary")
9.
10.pretty = make_pretty(ordinary)
11. pretty()
```

Ans:- I got decorated I am ordinary

Q7: What is the more pythonic way to use getters and setters?

Ans:- @property

Q8. In Python, there is a built-in function property() that returns a property object. The property object has which of the methods?

Ans:- getter(), setter() and delete()

Q9. Which of the following statement is true?

Ans:- None of the above

Q10. For the following codes, which of the following statements is true?

```
def printHello():
    print("Hello")
a = printHello()
```

Ans:- Both printHello() and the reference to the same object.

Q11. What is the output of the program?

```
def outerFunction():
  global a
  a = 20
def innerFunction():
   global a
   a = 30
  print('a =', a)
a = 10
outerFunction()
print('a =', a)
```

Ans:- a = 2

Q12. Which of the following statements is true?

Ans:- A class is a blueprint for the object.

Q13. What is the output of the code?

```
class Foo:
  def printLine(self, line='Python'):
    print(line)

o1 = Foo()
o1.printLine('Java')
```

Ans:-Java

Q14. What is the function of the__init__() function in Python?

Ans:- This function is called, when the new object is instantiated

Q15. What is the output of the code?

```
class Point:
   def  init (self, x = 0, y = 0): 3.
self.x = x+1                        4.
self.y = y+1                        5.
p1 = Point()
print(p1.x, p1.y)
```

Ans:- 1 1

Q16. Which of the following code used the inheritance feature?

Ans:-

```
1. class Foo:
2.    pass
3. class Hoo(Foo):
   pass
```

Q17 If you a class is derived from two different classes, it's called

Ans:- Multiple Inheritance

Q18. Which of the following statements is true?

a) In Python, the same operator may behave differently depends upon the operands.
b) You can change the way operators which behave in Python.
c) Special method_ add()__is called when + operator
d) All of the above.

Q19. What is the output of the code?

```
class Point:

    def __init__(self, x = 0, y = 0):
        self.x = x
        self.y = y

    def __sub__(self, other):
        x = self.x + other.x
        y = self.y + other.y
        return Point(x,y)
p1 = Point(3, 4)
p2 = Point(1, 2)
result = p1-p2
print(result.x, result.y)
```

Ans:- 4 6

Q20. Opening a file in 'a' mode

Ans:- opens the file for appending, at the end of file

Q21. What does the following code do?

```
f = open("test.txt").
```

Ans:- Opens test.txt file for reading only

Q22. Which of the codes closes files automatically if an exception occurs?

Choose one

a)

```
with open("test.txt", encoding = 'utf-8')  as
f:
  # perform file
  operation
```

b)

```
try:
    f = open("test.txt",encoding = 'utf-8')
    # perform file operations
finally:
   f.close()
```

c)None of the above

d)***Ans:-*** Both of the above

Q23. For the following code,

```
f = open('test.txt', 'r', encoding = 'utf-8')
f.read()
```

Which of the following statement is true

a) This program reads the content of the test.txt file.
b) If test.txt contains a newline, read() will return the newline as '\n'.
c) You can pass an integer to the read() method
d) ***Ans:-*** All of the above.

Q24. What does the following code do?

```
os.listdir()
```

Ans:- Prints all the directories and files inside the given directory

Q25. Which of the following is correct?

Ans:- An exception is an error that occurs in the runtime.

Q26. What will happen if we try to open the file that doesn't exist?

Ans:- An exception is raised.

Q27. What is the output of the code?

```
number = 5.0
try:
    r = 10/number
    print(r)
except:
    print("Oops! Error occurred.
```

Ans:- 2.0

Q28. What does the following code do?

```
try:
  # code that can raise an error

pass
except (TypeError, ZeroDivisionError):
  print("Two")
```

Ans:- Prints Two if the TypeError or ZeroDivisionError exception occurs.

Q29. Which of the following statement is true?

Ans:- You can create the user-defined exception by deriving a class from Exception class.

Q30. Which of the following statement is true?

Ans:- The function is a piece of code that can perform a specific task.

Q31. What is the output of the code?

```
def printLine(text):
    print(text, 'is awesome.')

printLine('Python')
```

Ans:- Python is awesome.

Q32. If the return statement is not used inside the function, the function will return:

Ans:- None object

Q33. What is the output of the code?

```
def greetPerson(*name):
    print('Hello', name)

greetPerson('Frodo', 'Sauron')
```

a) Hello ('Frodo', 'Sauron')

Q34. What is a recursive function?

Choose one

Ans:- A function that calls itself.

Q35. What is the output of the program?

```
result = lambda x: x
* x
print(result(5))
```

Ans:- 25

Q36. What is the output of the program?

```
def Foo(x):
  if (x==1):
    return 1
  else:
    return x+Foo(x-1)

print(Foo(4))
```

Ans:- 10

Q37. Suppose you need to print pi constant defined in the math module. Which of the following code can do this task?

Ans:-

```
from math import
pi
print(pi)
```

Q38. Which operator is used in Python to import modules from the packages?

Choose one

a). operator

b) * operator

c)-> symbol

d), operator

Q39. What is the output of the code?

```
numbers = [1, 3,
           6]
newNumbers = tuple(map(lambda x: x , numbers))
print(newNumbers)
```

Ans:- (1, 3, 6)

Q40. What is the output of the code?

```
if
None:
   print("Hello")
```

Ans:- Nothing will be printed

Q41. The **if-elif-else** executes only one block of code among several blocks.

Ans:- True.

Q42. What is the output of the code?

```
1. for i in [1, 0]:
2.     print(i+1)
```

a)2

1

Q43. In the Python, for and while loop can have the optional else statement?

Ans:- Both loops can have optional else statement

Q44. What is the output of the code?

```
1. i = sum = 0
2.
3.       while i <= 4:
4.    sum += i
5.    i = i+1
6.
7. print(sum)
```

a) ***Ans:-*** 10

Q45. What is the output of the code?

```
1.  while 4 == 4:
2.      print('4')
```

Ans:- **4** is printed infinitely until the program closes

Q46. Is it better to use the for loop instead of while if we are iterating through a sequence?

Ans:- Yes, for loop is more pythonic choice.

Q47. Which of the following statement is true?

a) "break"- It terminates the loop containing it.
b) "continue" - It is used to skip the rest of the code inside the loops.
c) break and continue: These are almost always used with if, if...else and if...elif...else statements.
d) ***Ans:-*** All of the above.

Q48. What is the output of the code?

```
1. for char in 'PYTHON STRING':
2.   if char == ' ':
3.       break
4.
```

```
print(char, end='')

 if char == 'O':
     continue
```

Ans:- PYTHON

Q49. Which of the statement is true about the “pass” statement?

Ans:- It is used as the placeholder for future implementation of functions, loops, etc

.

Q50. In regards to separated value files such as .csv and .tsv, what is the delimiter?

Ans:- Any character such as the comma (,) or tab (\t) that is used to separate the **column** data.

Q51. In separated value files such as .csv and .tsv, what does the first row in the file typically contain?

Ans:- The column names of the data.

Q52. Assume you have a file object my_data, which has properly opened a separated value file that uses the tab character (\t) as the delimiter.

What is the proper way to open the file using the Python CSV module and assign it to the variable csv_reader?

Assume that csv has already been imported.

Ans:- csv.reader(my_data, delimiter='\t')

Q53. When iterating over an object returned from csv.reader(), what is returned with each iteration?

For example, given the following code block that assumes csv_reader is an object returned from csv.reader(), what would be printed to the console with each iteration?

```
for item in csv_reader:
    print(item)
```

Ans:- The row data as a list

Q54. When writing to a CSV file using the .writerow() method of the csv.DictWriter object, what must each key in the input dict represent? Below is an example:

```
with open('test_file.csv', mode='w') as csv_file:

    writer = csv.DictWriter(
        csv_file,
        fieldnames=['first_col', 'second_col']
    )
    writer.writeheader()

    # This input dictionary is what the question is referring
    # to and is not necessarily correct as shown.
    writer.writerow({'key1':'value1', 'KEY2':'VALUE2'})
```

Ans:- Each key must match up to the field names (column names) used to identify the column data

Q55. Which is the correct way to open the CSV file hrdata.csv for reading using the pandas package? Assume that the pandas package has already been imported.

Ans:- pandas.read_csv('hrdata.csv')

Q56. By default, pandas uses 0-based indices for indexing rows. Which is the correct way to import the CSV file hrdata.csv for reading and using the 'Name' column as the index row instead?

Below is the contents of hrdata.csv

```
Name,Hire Date,Salary,Sick Days remaining
Fred,10/10/10,10000,10
```

Ans:- pandas.read_csv('hrdata.csv', index_col='Name')

Q57. Given the file dog_breeds.txt, which of the following is the correct way to open the file for reading as a **text file**? Select all that apply.

Ans:- open('dog_breeds.txt', 'w')

Q58. Given the following directory structure:

```
animals/
│
├── feline/
│   ├── lions.gif
│   └── tigers.gif
│
├── ursine/
│   └── bears.gif
│
└── animals.csv
```

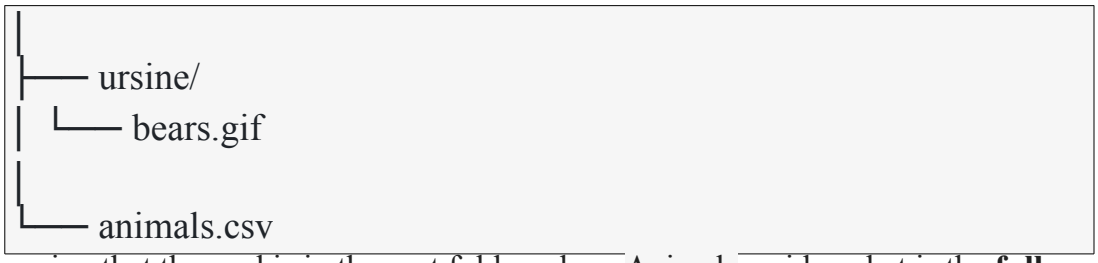
Assuming that the cwd is in the root folder where animals reside, what is the **full path** to
the feline folder?

Q59. Given the file jack_russell.png, which of the following is the correct way to open the file for reading as a **buffered binary file**? Select all that apply.

Ans:- open('jack_russell.png', 'rb')

Q60. Using the same directory structure as before:

```
animals/
│
├── feline/
│   ├── lions.gif
│   └── tigers.gif
```

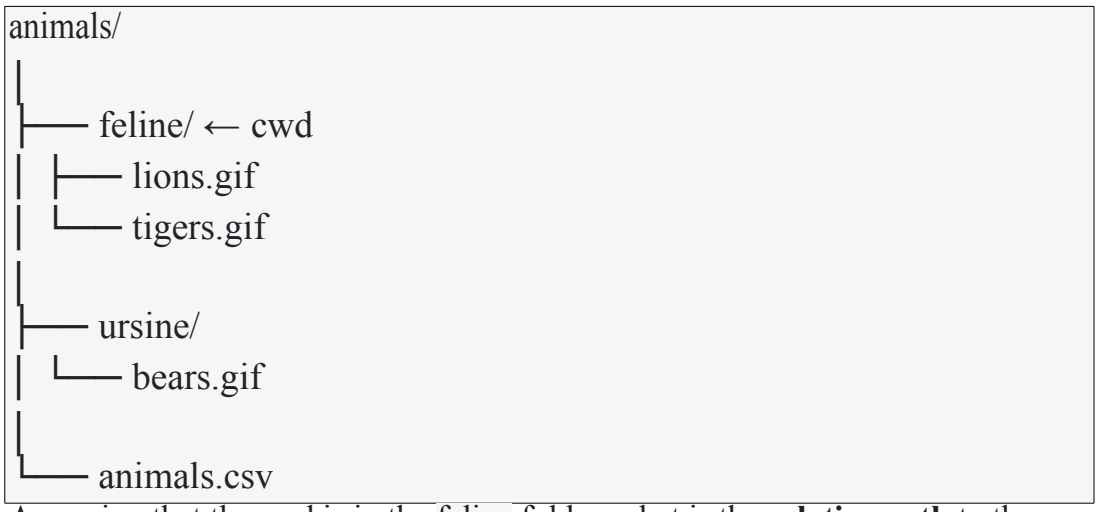


Assuming that the cwd is in the root folder where Animals reside, what is the **full path** to
the file bears.gif?

Q61. Whenever possible, what is the recommended way to ensure that a file object is properly closed after usage?

Ans:- By using the with statement

Q62. Using the same directory structure as before:



Assuming that the cwd is in the feline folder, what is the **relative path** to the file bears.gif?

Q63. When reading a file using the file object, what method is best for reading the entire file into a single string?

Ans:- .read()

Q64. The value 1.73 rounded to one decimal place using the “rounding up” strategy is…

Ans:- 1.8

Q65. The value -2.961 rounded to two decimal places using the “rounding down” strategy is…

Ans:- -2.97

Q66. When a value is truncated to 3 decimal places, which of the following is true?

Ans:- Positive numbers are rounded down, and negative numbers are rounded up.

Q67. The value -0.045 rounded to 2 decimal places using the “round half away from zero” strategy is…

Ans:- -0.05

Q68. Which rounding strategy does Python’s built-in round() function use?

Ans:- Round half to even

Q69. The value 4.65 rounded to one decimal place using the “round half to even” strategy is…

Ans:- 4.6

Q70. Which problem arises due to the multiple inheritances, if hierarchical inheritance is used previously for its base classes?

Ans:- Diamond

Q71. How many classes should a program contain to implement the multiple inheritances?

Ans:- At least 3

Q72. If class a inherits class b and class c as “class a: public class b, public class c {// class body ;}; ”, which class constructor will be called first?

Ans:- Class c.

Q73.If all the members of all base classes are private then,

Ans:- There won’t be any use of multiple inheritance

Q74. Can the derived class be made abstract if multiple inheritance is used?

Ans:- No, because other classes must be abstract too

Q75. Which among the following best defines the multilevel inheritance?

Ans:- Classes being derived from other derived classes

Q76. If there are 5 classes, E is derived from D, D from C, C from B and B from A. Which class constructor will be called first if the object of E or D is created?

Ans:- A

Q77. Which Class is having the highest degree of abstraction in

multilevel inheritance of 5 levels?

Ans:- Class at 1st level

Q78. Multilevel inheritance allows_____in the program.

Ans:- As many levels of inheritance as required

Q79. If all the classes used parameterized constructors and no default constructor then,

Ans:- Object of lower-level classes must call parent class constructors explicitly

Q80. Which is the universal exception handler class?

Ans:- Exceptions

Q81. What are two exception classes in the hierarchy of java exceptions class?

Ans:-Runtime exceptions and other exceptions

Q82. Which are the two blocks that are used to check error and handle the error?

Ans:- Try and catch

Q83. To catch the exceptions _____

Ans:- An object must be created to catch the exception

Q84. Which class is used to handle the input and output exceptions?

Ans:- IOExceptions

Q85. Which among the following is true for the class exceptions?

Ans:- Both base class and derived class may produce exceptions

Q86. If both base and derived class caught the exceptions,_____.

Ans:- Then catch block of a derived class must be defined before the base class

Q87. The catching of base class the exception_____in java.

Ans:- Before derived class is not allowed by the compiler

Q88. Which of the following handles the undefined class in the program?

Ans:- ClassNotFoundException

Q89. Which among the following is true?

Ans:- Both the base and derived class catch the blocks are important.

Q90. Which condition among the following might result in memory exception?

Ans:- Infinite loops

Q91. Which among the following is the correct definition for static member functions?

Ans:- Functions made to maintain a single copy of member functions for all the objects

Q92. The static member functions _____

Ans:- Having access to only the static members of a class.

Q93. Which is the correct syntax to access the static member functions with a class name?

Ans:- className :: functionName;

Q94. The static members are _____

Ans:- Created and initialised, only once

Q95. Which among the following is true?

Ans:- Static member functions can't be overloaded.

Q96. The static member functions _____

Ans:- Can't be declared const, volatile, or constant volatile.

Q97. Which among the following can't be used to access the members in anyway?

Ans:- Single colon.

Q98. If static data member are made inline, _____

Ans:- Those can be initialised within the class.

Q99. The static data member _____

Ans:- Can't be mutable

Q100. We can use the static member functions and static data member _____.

Ans:- Even if a class object is not created

Q101. Point out the wrong statement:

Ans:- rPy provides lots of scientific routines that work on top of NumPy.

Q102. The_____function returns its argument with the modified shape, whereas the_____method modifies the array itself.

Ans:- reshape, resize.

Q103. To create sequences of the numbers, NumPy provides a function _____analogous to range that returns arrays instead of lists.

Ans:- arrange.

Q104. Point out the correct statement:

Ans:- All of the Mentioned

Q105. Which of the following function stack 1D array as the columns into the 2D array?

Ans:- column_stack.

Q106. ndarray is also known as an alias array.

Ans:- True

Q107. Which of the following method creates the new array object that looks at the same data?

Ans:- view.

Q108. Which of the functions can be used to combine the different vectors to obtain the result for each n-uplet?

Ans:- ix_.

Q109. ndarray.dataitemSize is the buffer containing actual elements

of an array.

a) True

Q110. Which of the following is in the NumPy library?

Ans:- all of the Mentioned

Q111. Which of the following sets the size of the buffer used in ufuncs ?

Ans:- setbufsize(size)

Q112. Point out the wrong statement:

Ans:- In Numpy, universal functions are the instances of numpy.ufunction class

Q113. Which of the following attribute should be used while checking the type combination input and output?

a) types

Q114. Which of the following returns an array of “ones” with the same shape and type as a given array?

Ans:- ones_like

Q115. Point out the wrong statement:

Ans:- The output of the ufunc is necessarily a ndarray, if all the input arguments are ndarrays

Q116. Which of the following set of a floating-point error callback function or a log object?

Ans:- settercall.

Q117. Some ufuncs can take output arguments.

Ans:- False

Q118._____decompose the elements of x into the mantissa and the two’s exponent.

Ans:- frexp

Q119. Which of the following function take the only a single value as input?

Ans:- iscomplex.

Q120. The array object returned by the _array_prepare_ is passed to

ufunc for computation.

a) True

Q121. All pandas data structures are____mutable but not always _____-mutable.

Ans:- value,size.

Q122. Point out the correct statement:

Ans:- All of the above mentioned.

Q123. Which of the following statement will import the pandas?

Ans:- import pandas as pd

Q124. Which of the following object did we get after reading the CSV file?

Ans:- DataFrame.

Q125. Point out the wrong statement:

Ans:- The panel is generally 2D labelled, also a size-mutable array

Q126. Which of the following library is similar to the pandas?

Ans:- numpy.

Q127. Panel is a container for the Series, and DataFrame is a container for DataFrame objects.

Ans:- False

Q128. Which of the following is the prominent python “statistics and econometrics library”?

Ans:- Statsmodels.

Q129. Which of the following is the foundational exploratory visualisation package for the R language in the pandas ecosystem?

Ans:- yhat

Q130. Pandas consist of static and the moving window linear and panel regression.

Ans:- True

Q131. Quandl API for Python wraps the___REST API to returns the pandas DataFrames with time series indexes.

Ans:- Quandl.

Q132. Point out the correct statement:

Ans:- Statsmodels provides powerful statistics, econometrics, analysis and the modelling functionality which is out of pandas' scope

Q133.Which of the following library is used to retrieve and to acquire statistical data and metadata disseminated in SDMX 2.1?

Ans:- pandaSDMX

Q134. Which of the following provides the standard API for doing computations with MongoDB?

Ans:- Blaze.

Q135. Point out the wrong statement:

Ans:- Spyder is a cross-platform Qt-based open-source R IDE

Q136. Which of the following makes use of the pandas and returns data in a Series or DataFrame?

Ans:- freedapi.

Q137. Spyder can introspect and display Pandas DataFrames.

Ans:- False

Q138. Which of the following is used for machine learning in the python?

Ans:- sci-kit-learn.

Q139. The_____project builds on top of the pandas and matplotlib to provide easy plotting of data.

Ans:- Seaborn.

Q140 x-ray brings the labelled data power of pandas to the physical sciences.

Ans:- True

Q141. Which of the following is the base layer of all of the sparse has it indexed data structures?

Ans:- SparseArray.

Q142. Point out the correct statement.

Ans:- All of the mentioned.

Q143. Which of the following is not an indexed object?

Ans:- None of the mentioned.

Q144. Which of the following list like data structure is used for managing the dynamic collection of SparseArrays?

Ans:- SparseList.

Q145. Point out the wrong statement.

Ans:- to_array. append can accept scalar values or any 2-D sequence.

Q146. Which of the following method used for transforming the Sparse-series index by the MultiIndex to a scipy.sparse.coo_matrix?

Ans:- SparseSeries.to_coo().

Q147. The integer format tracks only the locations and the sizes of blocks of data.

Ans:- False

Q148. Which of the following is used for the testing for membership in the list of column names?

Ans:- in.

Q149. Which of the following indexing capabilities is used as the concise means of selecting data from a pandas object?

Ans:- ix.

Q150. Pandas follow the NumPy convention of raising an error when you try to convert something to a bool.

Ans:- True
