Exam 1 Model question

FM:30

Pass Marks:12

Time: 1 hr

**Group – A**

Attempt all question in Group ‘A’, each question is of 1 Marks.

1. Which of the following is not a built-in data type in Python?
   1. int
   2. float
   3. string
   4. list
2. What is the output of the following Python expression?

3 + 2 \* 4

* 1. 20
  2. 15
  3. 11
  4. 14

1. Which keyword is used to define a function in Python?
   1. func
   2. def
   3. define
   4. function
2. What is the purpose of the "import" statement in Python?
   1. It is used to define a new variable.
   2. It is used to import a library or module
   3. It is used to perform mathematical operations.
   4. It is used to print output to the console.
3. Which operator is used to perform exponentiation in Python?
   1. ^
   2. \*\*
   3. //
   4. %
4. Which Python statement is used to exit a loop prematurely?
   1. return
   2. break
   3. continue
   4. exit
5. What is the result of print(math.pow(2,3))?
   1. 8
   2. 8.0
   3. 9
   4. 9.0
6. What is the output of the following code snippet?

*def fxn(n):*

*if n == 0:*

*return 1*

*else:*

*return n \* fxn(n - 1)*

*print(fxn(5))*

* 1. 120
  2. 48
  3. 24
  4. 720

1. How do you access the last element of a list in Python?
   1. List\_name[0]
   2. List\_name[-1]
   3. List\_name[len(list\_name)]
   4. None of the above
2. Which library in Python is used for data analysis and manipulation?
   1. Pandas
   2. Matplotlib
   3. Requests
   4. Tkinter

**“Group – B”**

*Attempt any “five” question from Group “B”, each question is of 2 Marks.*

1. How do you create simple line graph using matplotlib?
2. How do you change the color and style of a matplotlib graph?
3. What is wrong with the code below, and how would you fix it?

*import matplotlib.pyplot as plt*

*x = [1, 2, 3, 4, 5,9]*

*y = [2, 4, 6, 8, 10]*

*plt.plot(x, y)*

*plt.title("My Plot")*

*plt.show()*

1. What is the output of the code given below, and what modification(s) would you make to fix it?

*def countdown(n):*

*if n = 0:*

*print("Done!")*

*else:*

*print(n)*

*countdown(n - 1)*

*countdown(5)*

1. The code below is supposed to calculate the mean of the array, but it throws an error. What is the issue, and how would you resolve it?

*import numpy as np*

*array = np.array([1, 2, 3, 4, 5])*

*result = np.mean(array)*

*print(result)*

1. The code below is intended to calculate the nth Fibonacci number, but it is not producing the correct result. What modification(s) would you make to fix it?

*def fibonacci(n):*

*if n == 0 or n == 1:*

*return n*

*else:*

*return fibonacci(n) + fibonacci(n - 2)*

*result = fibonacci(6)*

*print(result)*

***Group C***

*Attempt any Two Question from Group C, Each Question carry 5 marks.*

1. Write a recursive python program/algorithm to solve Tower of Hanoi having n disc.
2. Encode the following function in python program, write what the program does? Calculate the value of f(5).
3. Write a python function sumDigits(n) that returns the sum of digits of n.

ex sumDigits(123) returns 6 (1+2+3).

“The end”