Python Essentials PYQs

Unit 1

End 2023 12

i. What are the key features of python? 2
ii. Write the difference between Python 2 and Python 3. 3
iii. Explain different operators of Python with suitable example. 5
OR iv. Write a Python program which accepts the value of all sides for a triangle
from the user and compute the semi perimeter and area of triangle.

End 2022 12

. What is the output of print str * 2 if str = 'Hello World!'? 2
ii. Write a python script to display the current date and time. 3
iii. Write a python program which accepts the radius of a circle from the
user and compute the area.
5
OR iv. Write a python program which accepts the user's first and last name
and print them in reverse order with a space between them.

End 2022 05

i. Explain data types and sequence with examples in Python. 2
ii. Explain all the operators with suitable examples in Python. 3
iii. Describe installation process and applications of Python.
iv. A python programme that helps to know the effect of slicing
operation on a List x=[10,20,30, Bombay, Delhi]. Find
(a) y=x[1:4], (ii) y=x[0:], (iii) y=x[:4], (iv) y=x[-4:] and
(b) y=x[-4:-1]

End 2019 12

i. Define indentation in python. Write at least four differences
between C and Python programming.
4
ii. Write a program in python which accepts length and breadth from
user and compute the area.
6
OR iii. Write a short note on Frozen Binaries, Docstring and Frozenset
Datatype with example of each.

End 2019 05

i. What is numeric literal? Give an example. 2

ii. Explain the arithmetic operators in Python with an example. 3

iii. What are the different data types supported by Python, explain with examples.
5

OR iv. Write a program to read a four-digit number through the keyboard and calculate the sum of its digits.

Unit 2

MST

End 2023 12

Q.3 i. Write differences between lists and tuples. 2

ii. What is recursion? Write a Python program to find factorial of number using recursion.
8

OR iii. Explain control flow in Python. Write a Python program which find out the number that is entered by user is positive negative or zero.

End 2022 12

Q.3 i. Write a python function to find the maximum of three numbers. 2

ii. Write a python function to calculate the factorial of a number (a non-negative integer). The function accepts the number as an argument.
8

OR iii. Write a python function that accepts a string and calculate the number of upper-case letters and lower-case letters.
8

End 2022 05

Q.3 i. Compare two strings S1='Box' and S2='Boy' and print either string contents are same or not.
3

ii. Write a program to define a function inside another function.
First function: def display (str):
Second function: def message ():
The statement of second function is 'How are you?'. Hint:
str='Krishna'. Print How are you? Krishna on output?
7

OR iii. Explain the positional and keyword arguments with suitable

examples? Also Write a program that create a list using range
function and display the content of list.
7

End 2019 12

Q.3 i. What is lambda function in python? Explain with any one
example.
4
ii. Write a python program to search a specific value from a given
list of values using binary search method.
6
OR iii. Explain and write codes for following functions:
(a) str() (b) globals() (c) locals() (d) exec()
(e) eval() (f) vars()
6

End 2019 05

Q.3 i. What is Lambda function? How it useful in python programming,
Explain with example.
4
ii. Write a Python program to find the factorial of a given number
without recursion and with recursion.
6
OR iii. Write a Python program to generate first 'N' Fibonacci numbers. 6

Unit 3

End 2023 12

Q.4 i. What do you mean by file? Explain its operations in Python. 3
ii. Write a Python program to read entire Python text file and exactly 4 lines
from Python text file? Write differences between read(), readline() and
readlines().
7
OR iii. Describe seek() and tell() in python. Write a Python program to change
the position of the pointer to read the File and print the complete file
after that and show the pointer current position.
7

End 2022 12

Q.4 i. Write a python program to read an entire text file. 3
ii. Write a python program to count the frequency of words in a file. 7

OR iii. Write a python program to write a list to a file. 7

End 2022 05

Q.4 i. Describe seek() and tell() methods with examples. 2
ii. Write a program to open a blank file 'myfile.txt' and enter text into
the file 'Hello Medi-Caps, Python is very famous language in
current decade, you must learn it.' Then file close it and Further,
read the content 'myfile.txt'.
8
OR iii. Explain read(), write(), readlines() and writelines() functions with
suitable examples.
8

End 2019 12

Q.4 i. What do you mean by pickle and unpickle in python? Give an
example to illustrate each.
4
ii. Write a python program to search for city name in the file and
display the record number that contains the city name.
Expected outcome:
Size of file (in Bytes) = 80 Bytes
No. of records = 4
Enter City Name = Indore
Found at record no. = 2
6
OR iii. Differentiate read(), readline() & readlines() and write a program
to demonstrate all three methods.
6

End 2019 05

Q.4 i. State the syntax to open, write text and close a file. 3
ii. What is binary file? List its applications. 7
OR iii. Tabulate the different modes for opening a file and explain the
same.
7

Unit 4

End 2023 12

Q.5 i. Write a Python class named Rectangle constructed from length and width
and a method that will compute the area of a rectangle.

4

ii. Explain the concept of Inheritance in Python with an example. Write a Python program for method overriding in Python.
6

OR iii. Write a Python class named Student with two attributes: student_id, student_name. Add a new attribute: student_class. Create a function to display all attributes and their values in the Student class.
6

End 2022 12

Q.5 i. Write a python class to implement pow(x, n). 4

ii. Write a python class named Circle constructed by a radius and two methods which will compute the area and the perimeter of a circle.
6

OR iii. Explain the concept of inheritance in python with an example. Write a python program for method overriding in python for two level multilevel inheritance.
6

End 2022 05

Q.5 i. What will be the output of the following Python code?
class change:
def **init**(self, x, y, z):
self.a = x + y + z
x=change(1,2,3)
y = getattr(x, 'a')
setattr(x, 'a', y+1)
print(x.a)
4

ii. Father property is 8 Lacs and Son property is 2 Lacs Write a Python program to find total property of Son while calling the super class constructor in the sub class using super().
6

OR iii. Give the detail explanation of features of object-oriented programming concepts of Python.
6

End 2019 12

Q.5 i. How operator overloading can be implemented in Python? Give an example.
4

ii. What are the differences between abstract class and interface?

Write a python program in which Maruti and Santro sub classes
implement the abstract methods of the super class Car.
6
OR iii. Create a class student with following member attributes: roll no,
name, age and total marks. Create suitable methods for reading
and printing member variables. Write a python program to
overload '== ' operator to print the details of students having same
marks.
6

End 2019 05

Q.5 i. State the syntax to define a class and add method in a class. 4
ii. Explain three feature of OOP's using Python program. 6
OR iii. Write a program to create a class Circle. Perform the following
operations on it.
(a) Define the attributes radius.
(b) Define the constructor with one argument containing radius.
(c) Define the method named get_radius () which returns the
radius of the circle.
(d) Define the method named calc_area() which return the area of
the circle.
6

Unit 5

End 2023 12

Q.6 Attempt any two:
i. What do you mean by dictionary? Write a Python program to check
whether a given key already exists in a dictionary.
5
ii. Explain exception handling in python. Write a Python program to handle
a ZeroDivisionError exception when dividing a number by zero.
5
iii. Describe random module in Python. Explain its three methods with
example.

End 2022 12

Q.6 Attempt any two:
i. Write a python program to add member(s) in a set. 5
ii. Write a python program to create a union of sets. 5
iii. Write a python program to remove duplicates from a list. 5

End 2022 05

Q.6 Attempt any two:
i. Create a Python program that displays total and average of list elements using two exceptions Type Error and Zero Division.
5
ii. A python programme to create a dictionary with employee details and retrieve the values open giving keys.
5
iii. Explain List and Dictionary Comprehensions. 5

End 2019 12

Q.6 Attempt any two:
i. Describe how aliasing creates a problem in mutable data type with an example.
5
ii. What is dictionary in Python? Explain with an example. 5
iii. What do you mean by exception handling in python? Explain at least six types of exceptions.
5

End 2019 05

Q.6 Attempt any two:
i. How Python handles exception? Explain with an example. 5
ii. Differentiate between tuples and sets based on their mutability, orderedness and uses.
5
iii. How can all keys and values of a dictionary be traversed? Explain with an example.
5