

[4]

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

- 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**

Total No. of Questions: 6

Total No. of Printed Pages:4

Enrollment No.....



Faculty of Engineering
End Sem (Even) Examination May-2022
OE00018 Python Essentials

Programme: B.Tech.

Branch/Specialisation: All

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. Which command is used to install numpy package in Python? **1**
(a) Install numpy (b) Python numpy
(c) Pip numpy (d) Pip install numpy
- ii. What data type is the object below? L = [1, 23, 'hello', 1]. **1**
(a) List (b) Dictionary
(c) Tuple (d) Array
- iii. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.pop(1)? **1**
(a) [3, 4, 5, 20, 5, 25, 1, 3] (b) [1, 3, 3, 4, 5, 5, 20, 25]
(c) [3, 5, 20, 5, 25, 1, 3] (d) [1, 3, 4, 5, 20, 5, 25]
- iv. Given a string s = "Welcome", which of the following code is incorrect? **1**
(a) print s[0] (b) print s.lower()
(c) s[1] = 'r' (d) print s.strip()
- v. Which of the following command is used to open a file "c:\temp.txt" in read-mode only? **1**
(a) infile = open("c:\temp.txt", "r+")
(b) infile = open("c:\\temp.txt", "r")
(c) infile = open(file = "c:\temp.txt", "w+")
(d) infile = open(file = "c:\\temp.txt", "a")
- vi. What does the <readlines()> method returns? **1**
(a) str (b) a list of lines
(c) list of single characters (d) list of integers

P.T.O.

[2]

- vii. What is Instantiation in terms of OOP terminology? **1**
 (a) Deleting an instance of class
 (b) Modifying an instance of class
 (c) Copying an instance of class
 (d) Creating an instance of class
- viii. What will be the output of the following Python code? **1**
 class test:
 def __init__(self,a="Hello World"):
 self.a=a
 def display(self):
 print(self.a)
 obj=test()
 obj.display()
 (a) The constructor cannot have default arguments
 (b) Nothing is displayed
 (c) 'Hello World' is displayed
 (d) None of these
- ix. What is the output of Dictionary comprehension? **1**
 original_dict = {'jack': 38, 'michael': 48, 'guido': 57, 'john': 33}
 even_dict = {k: v for (k, v) in original_dict.items() if v % 2 == 0}
 print(even_dict)
 (a) {'jack': 38, 'michael': 48}
 (b) {'guido': 57, 'john': 33}
 (c) {'michael': 48, 'guido': 57}
 (d) None of these
- x. When else part of try-except-else be executed? **1**
 (a) Always
 (b) When an exception occurs
 (c) When no exception occurs
 (d) When an exception occurs in to except block
- Q.2 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. **5**

[3]

- OR iv. A python programme that helps to know the effect of slicing **5**
 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]
- Q.3 i. Compare two strings S1='Box' and S2='Boy' and print either **3**
 string contents are same or not.
 ii. Write a program to define a function inside another function. **7**
 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?
- OR iii. Explain the positional and keyword arguments with suitable **7**
 examples? Also Write a program that create a list using range
 function and display the content of list.
- 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 **8**
 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'.
- OR iii. Explain read(), write(), readlines() and writelines() functions with **8**
 suitable examples.
- Q.5 i. What will be the output of the following Python code? **4**
 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)
 ii. Father property is 8 Lacs and Son property is 2 Lacs Write a **6**
 Python program to find total property of Son while calling the
 super class constructor in the sub class using super().

P.T.O.

Scheme of Marking - OE00018 Python Essentials

- Q.1 i. Which command is used to install numpy package in Python? **1**
(d) Pip install numpy
- ii. What data type is the object below? L = [1, 23, 'hello', 1]. **1**
(a) List
- iii. Suppose list1 is [3, 4, 5, 20, 5, 25, 1, 3], what is list1 after list1.pop(1)? **1**
(c) [3, 5, 20, 5, 25, 1, 3]
- iv. Given a string s = "Welcome", which of the following code is incorrect? **1**
(c) s[1] = 'r'
- v. Which of the following command is used to open a file "c:\\temp.txt" in read-mode only? **1**
(b) infile = open("c:\\temp.txt", "r")
- vi. What does the <readlines()> method returns? **1**
(b) a list of lines
- vii. What is Instantiation in terms of OOP terminology? **1**
(d) Creating an instance of class
- viii. What will be the output of the following Python code? **1**
class test:
 def __init__(self,a="Hello World"):
 self.a=a
 def display(self):
 print(self.a)
obj=test()
obj.display()
(c) 'Hello World' is displayed
- ix. What is the output of Dictionary comprehension? **1**
original_dict = {'jack': 38, 'michael': 48, 'guido': 57, 'john': 33}
even_dict = {k: v for (k, v) in original_dict.items() if v % 2 == 0}
print(even_dict)
(a) {'jack': 38, 'michael': 48}
- x. When else part of try-except-else be executed? **1**
(c) When no exception occurs

- Q.2 i. Data types with examples 1 mark **2**
Sequence with examples 1 mark
- ii. Explain all the operators with suitable examples **3**
Write at least 6 operators with examples
Each operator (0.5*6)
- iii. Installation process 2.5 marks **5**
Applications of Python 2.5 marks
- OR iv. A python programme that helps to know the effect of slicing operation on a List x=[10,20,30, Bombay, Delhi]. Find **5**
For each step (1*5) marks
- Q.3 i. Compare two strings S1='Box' and S2='Boy' **3**
For each step (1*3) marks
- ii. Write a program to define a function inside another function. **7**
For each step (1*7) marks
- OR iii. Positional with suitable examples 1.5 marks **7**
Keyword arguments with suitable examples 1.5 marks
Write a program that create
Each step of prog. (1*4) marks
- Q.4 i. Seek() methods with examples 1 mark **2**
Tell() methods with examples 1 mark
- ii. Write a program to open a blank file 'myfile.txt' and enter text into the file 'Hello Medi-Caps', **8**
Each step of prog. (1*8) marks
- OR iii. Explain read(), write(), readlines() and writelines() functions with suitable examples. **8**
Each function has (2*4) marks
- Q.5 i. What will be the output of the following Python code? **4**
class change:
 Output will be 4 marks
 As per explanation
- ii. Father property is 8 Lacs and Son property is 2 Lacs Write a Python program **6**
Each step of prog. (1*6) marks
As per explanation

OR iii. Give the detail explanation of features of object-oriented programming concepts of Python. 6
 Each feature has (2*3) marks
 As per explanation

Q.6	Attempt any two:		
i.	Create a Python program that		5
	Each step of prog.	(1*5) marks	
ii.	A python programme to create a		5
	Each step of prog.	(1*5) marks	
iii.	List Comprehensions	2.5 marks	5
	Dictionary Comprehensions	2.5 marks	
