Name: Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Examination, Dec 2023

Course: Introduction to Programming
Semester: III
Program: Int BBA-MBA　　　　　　　　　　　　　**Time　　: 03 hrs.**
Course Code: DSIT 2015　　　　　　　　　　　　**Max. Marks: 100**

Instructions: Attempt all sections

<table>
<tr><td colspan="4" align="center">SECTION A
10Qx2M=20Marks</td></tr>
<tr><td>S. No.</td><td></td><td>Marks</td><td>CO</td></tr>
<tr><td>Q 1</td><td>Write the outputs for the following snippets of Python code:</td><td></td><td></td></tr>
<tr><td>a.</td><td>a= input('Enter your height:')
type(a)</td><td>2</td><td>CO1</td></tr>
<tr><td>b.</td><td>print(25//3)</td><td>2</td><td>CO1</td></tr>
<tr><td>c.</td><td>type(False)</td><td>2</td><td>CO1</td></tr>
<tr><td>d.</td><td>a=1
float(a)
type(a)</td><td>2</td><td>CO1</td></tr>
<tr><td>e.</td><td>x=500
y=500
print(x==y)</td><td>2</td><td>CO2</td></tr>
<tr><td>f.</td><td>str1='data analytics'
print(str1[3:7])</td><td>2</td><td>CO2</td></tr>
<tr><td>g.</td><td>a='abcdefghij'
print(a[-4:]*3)</td><td>2</td><td>CO2</td></tr>
<tr><td>h.</td><td>list1=['Chennai', 'Goa', 'Mumbai']
print('Banglore' not in list1)</td><td>2</td><td>CO2</td></tr>
<tr><td>i.</td><td>str1='data science'
print(str1[1:-2])</td><td>2</td><td>CO2</td></tr>
<tr><td>j.</td><td>print(9**(1/2))</td><td>2</td><td>CO1</td></tr>
<tr><td colspan="4" align="center">SECTION B
4Qx5M= 20 Marks</td></tr>
<tr><td>Q2.</td><td>What is Python? What are the benefits of using Python?</td><td>5</td><td>CO1</td></tr>
<tr><td>Q3.</td><td>What are lists and tuples? What is the key difference between the two?</td><td>5</td><td>CO3</td></tr>
<tr><td>Q4.</td><td>What are the common built-in data types in Python?</td><td>5</td><td>CO2</td></tr>
<tr><td>Q5.</td><td>What is break, continue and pass in Python?</td><td>5</td><td>CO3</td></tr>
</table>

SECTION-C 3Qx10M=30 Marks			

Q6.	In reference to the lists in Python, explain the difference between:
	    a) append and extend
	    b) pop, remove and del
		10	**CO3**

Q7.	Explain how do the following functions work:
	    a) filter
	    b) map
		10	**CO3**

Q8.	Write a Python program to check if a number given by the user is prime. **OR** What are lambda functions? Explain with examples the difference between lambda and normal functions.	**10**	**CO4**
SECTION-D 2Qx15M= 30 Marks			

Q9.	A. Attempt both the parts:
	    i. Write a Python program, where user is asked to input a number and then the program checks if the number is positive, negative or zero and displays an appropriate message [use nested if statement].
	
	    ii. What will be the output for the following Python program:
	
	count = 0
	a = 'Programming'
	while count < len(a):
	  if a[count] == 'a' or a[count] == 'g':
	    count += 1
	    continue
	
	  print('Current Letter :', a[count])
	  count += 1
		15	**CO4**

Q10.	A. Attempt both the parts.
	
	    i. Write a Python program to print a list of numbers between 55 and 100 that are divisible by 7
	    ii. Write the output for the following Python program:
	
	d = {1:'Jimmy', 2:'Alex', 3:'john', 4:'mike'}
	print("1st name is "+d[1])
	print("2nd name is "+ d[4])
	print (d.keys())
	print (d.values())
		15	**CO4**

<div align="center">**OR**</div>

B. Write a Python Program to print the Fibonacci number series up to a limit given by the user.

[Hint: Fibonancci number series is constructed as follows: 1st and 2nd terms of the series are 0 and 1 respectively. 3rd term is the sum of the 1st and the 2nd terms. 4th term is the sum of 2nd and 3rd terms. 5th term is the sum of the 3rd and 4th terms and so on….]