

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
School of Computer Science

End Semester Examination, December 2021

Course : Programming with Python
Program : B.Tech CSE CSF
Course Code : CSAI 1001

Semester: VI
Time: 03 Hours
Max. Marks : 100

Instructions :

SECTION A

5Qx 4M = 20 Marks)

Instructions:		Marks	
1. Each Question will carry 4 Marks			
Q1	Apply for loop to print numbers from 0 to 57, using range function.	4	CO1
Q2	Recognize the meaning of 'self' in a Python class?	4	CO2
Q3	Explain pickling and how import pickle works.	4	CO2
Q4	Describe try except block in detail.	4	CO1
Q5	Outline the difference between modify and copy operations performed in dictionary?	4	CO1

SECTION B

(4Qx10M = 40 Marks)

Instructions:			
1. Each question will carry 10 marks			
2. Instruction: Write short / brief notes			
Q6	a) Analyze the purpose of else clause for a loop? Explain how else works with while and for loops, with examples.	5	CO1
	b) Devise a Python program that prints multiplication table of a given number.	5	
Q7	a) What is a list in Python? How to create nested lists? Demonstrate how to create and print a 3-dimensional matrix with lists.	5	CO1
	b) Write a Python program that counts the number of occurrences of a letter in a string, using dictionaries.	5	CO4
	OR		
	a) List different operators in Python, in the order of their precedence.	5	CO4
Q8	b) Write a Python program to compute distance between two points in a 2-Dimensional coordinate system.	5	
	a) Illustrate the use of Inheritance in Python.	5	CO2
	b) Write a Python program to count the frequency of words in a file.	5	CO2

Q9	a) What is Module in Python? Explain, how can you use Modules in your program explain with an example	5	CO3
	b) Explain Python Built-in Exceptions.	5	CO1

SECTION C

(2Qx 20M= 40 Marks)

Instructions:

1. Each Question carries 20 Marks.

2. Instruction: Write long answer.

Q10	a) What are regular expressions? How to find whether an email id entered by user is valid or not using Python 're' module.	10	CO1																														
	b) Write a Python program that creates a GUI with a textbox, Ok button and Quit button. On clicking Ok, the text entered in textbox is to be printed in Python shell; on clicking Quit, the program should terminate.	10	CO3																														
OR																																	
Q11	a) Convert numbers =[1, 2.0, 3] to numpy array and convert all elements to string type	5	CO4																														
	b) Find output of a<35, if a= [61, 22, 32, 45]	5	CO1																														
	c) Write a NumPy program to generate an array of 15 random numbers from a standard normal distribution.	5	CO4																														
	d) Write a Python GUI program to create a label and change the label font style (font name, bold, size) using tkinter module	5	CO3																														
Q11	Refer the given excel file and perform various operations using pandas library:																																
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a) Read the above excel file in python.	5																																
b) How do I write this file to a new file "new.csv"?	5																																
c) Include column names in this file. Use 'ticker', 'eps', 'revenue', 'price', 'people' as column names.	5																																
d) Fill NAN values using a suitable approach.	5																																

CO2