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Question Paper Code: U5703

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Fourth Semester

Mechanical Engineering

21UME503 –OBJECT ORIENTED PYTHON PROGRAMMING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20Marks)

- _____ is a valid way to declare a dictionary in Python. CO1-U
(a) {1: "one", 2: "two", 3: "three"} (c) (1: "one", 2: "two", 3: "three")
(b) [1: "one", 2: "two", 3: "three"] (d) <1: "one", 2: "two", 3: "three">
- _____ is the syntax used to get the input from the user. CO2 -App
(a) input() (b) int() (c) id() (d) iter()
- By which statement can we come out of the loop? CO1- U
(a) continue (b) leave (c) catch (d) break
- _____ is a built-in function in python. CO1-U
(a) fact() (b) print() (c) power (d) squareroot()
- Brief the queue type LIFO CO1-U
(a) 4.5 (b) First in first out (c) First in last out (d) Last in first out
- Which function is used to shuffle a list in Python? CO1-U
(a) random.shuffle() (b) shuffle() (c) list.shuffle() (d) random_list()
- How many objects and reference variables are there for the given Python code? CO4-App
class A:
 print("Inside class")
A()
A()
obj=A()
(a) 2 and 1 (b) 3 and 3 (c) 3 and 1 (d) 3 and 2

8. Which of the following is not an OOPS concept? CO1-U
 (a) Encapsulation (b) Polymorphism (c) Exception (d) Abstraction
9. What will be output for the following code? CO4 - App
 try:
 print(x)
 except:
 print("An exception occurred")
 (a) x (b) An exception occurred (c) Error (d) None of the above
10. When an error occurs during the execution of a program, an exception is said to have been _____. CO1 - U
 (a) Created (b) Asserted (c) Triggered (d) Raised

PART – B (5 x 6= 30 Marks)

11. Write a Python program to calculate the area of a circle with radius value of 10cm. CO2 - App
12. Write a program to print the word “WATERMELON” in vertical manner using for loop. CO2 - App
13. Write a python queue program for the range of 5 and returns FIFO. CO3 - App
14. Create a class with the name of addition to add any two numbers and call these values into a new class multiply to multiplication of these numbers using inheritance. CO4 - App
15. Explain the syntax of try and except with an example. CO1 - U

PART – C (5 x 10= 50 Marks)

16. (a) Write a program to perform Addition, Subtraction, Multiplication, Division, Modulus Division and Floor Division on two integer numbers (9, 6) and two floating-point numbers (10.1, 6.2). CO2 - App (10)
- Or
- (b) Write a python program to find the length of the lists, form matrix from the lists and find the first column of the matrix from the given lists: CO2 - App (10)
 List1 = [10,11,12]
 List2 = [13,14,15]
 List3 = [16,17,18]
17. (a) If 91 to 100 = S, 81 to 90 = A+, 71 to 80 = A, 60 to 70 = B+, 51 to 59 = B, <50 = RA. Find out grades for 75, 85, 95 using if elif and else statements. CO2 - App (10)

Or

- (b) Write a python program for display the odd and even numbers in a list using while loop. L1 = [1,2,3,4,5,6,7,8,9,10] CO2 - App (10)

18. (a) Write a Python queue program for the range of 51 to 60 and returns first in first out. CO3 - App (10)

Or

- (b) Write a Numpy program to create the 2D array [[1,2,3],[4,5,6],[7,8,9]] and find the addition of the two arrays and find the transpose for the output. CO3 - App (10)

19. (a) Write a Python program to create two classes for calculating stress and strain by getting the input data from the user and use the output in third class and calculate the Young's Modulus value. CO3 - App (10)

Or

- (b) Write a program to create inheritance for derived function from addition (addition of two numbers) and multiplication (multiplication of two numbers) class to division class (multiplication output / addition output). CO3 - App (10)

20. (a) Write a Python String Format Program to draw a table with Left, Centre and Right alignment for the given below values: CO3 - App (10)

1		2		3
4		5		6
7		8		9
10		11		12
13		14		15

Or

- (b) Write a simple try and except program for the following outputs. CO3 - App (10)
'No Error occurred'
'Zero Division Error occurred and handled'
'Name Error occurred and handled'

