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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Sixth Semester, B.E. - Computer Science and Engineering
Semester End Examination; July / Aug. - 2022
Python Programming

Time: 3 hrs   Max. Marks: 100

Course Outcomes

The Students will be able to:
CO1: Develop python programs using modular approach.
CO2: Demonstrate proficiency in handling Strings and File Systems.
CO3: Implement Python Programs using data structures.
CO4: Develop application using object oriented and database concepts.
CO5: Create graphical user interface for the applications.

<u>*Note:*</u> *I) PART - A is compulsory. **Two** marks for each question.*

  *II) PART - B: Answer any <u>Two</u> sub questions (from a, b, c) for a Maximum of **18 marks** from each unit.*

Q. No.	Questions	Marks	BLs	COs	POs
	I : PART - A	**10**			
I a.	What is the output of this code? >>> int("30" + "40")	2	L1	CO1	1,2,3,5
b.	How many numbers will be printed? i = 10 while True; print(i) i = i − 1 if i <= 1: break	2	L1	CO2	1,2,3,5
c.	Compare append ( ) and insert ( ) methods of list.	2	L4	CO3	1,2,3,5
d.	Define class instantiation.	2	L1	CO4	1,2,3,5
e.	List any two turtle methods.	2	L1	CO5	1,3,5
	II : PART - B	**90**			
	UNIT - I	**18**			
1 a.	Explain if elif, for and while, statement in python with example for each.	9	L2	CO1	1,2,3,5
b.	Write a program to calculate basic arithmetic operations taking two numbers as arguments.	9	L4	CO1	1,2,3,5
c.	Write a function is_leap_year which takes the year as its argument and checks whether the year is a leap year or not and then displays the appropriate year.	9	L4	CO1	1,2,3,5
	UNIT - II	**18**			
2 a.	Write a program to print Fibonacci series.	9	L4	CO2	1,2,3,5
b.	Explain opening and closing of a file. Write a program for each file operation.	9	L4	CO2	1,2,3,5
c.	Explain len ( ) function. Write a program to find the length of the string.	9	L4	CO2	1,2,3,5

	UNIT - III	**18**			
3 a.	Define dictionary. Explain;				
	i) Creating a dictionary	9	L2	CO3	1,2,3,5
	ii) Accessing values with examples				
b.	Define list. Explain sort ( ) and write a program to sort elements in ascending order	9	L4	CO3	1,2,3,5
c.	Define tuple. List advantages of tuple over list.	9	L1	CO3	1,2,3,5
	UNIT - IV	**18**			
4 a.	Define inheritance. Explain the types of inheritance.	9	L1	CO4	1,3
b.	Write a program that has a class point with attributes as X and Y co-ordinates. Make two objects of this class and find the midpoint of both the points.	9	L4	CO4	1,2,3,5
c.	What is operator overloading in python? Explain with help of program.	9	L4	CO4	1,2,3,5
	UNIT - V	**18**			
5 a.	Explain the benefits of pickling objects for file storage with example.	9	L2	CO5	3,5
b.	Explain random walk in turtle. Write a program that defines a function random walk that expects as arguments a turtle object, the number of turns and distance to move after each turn	9	L2	CO5	1,3,5
c.	Write a program that draws a radial pattern of squares in a random fill color at each corner of the window.	9	L4	CO5	1,3,5

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