

**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.***Note: I) PART - A is compulsory. Two marks for each question.****II) PART - B: Answer any Two 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? <pre>>>> int("30" + "40")</pre>	2	L1	CO1	1,2,3,5
b.	How many numbers will be printed? <pre>i = 10 while True; print(i) i = i - 1 if i <= 1: break</pre>	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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