

**P.E.S. College of Engineering, Mandya - 571 401***(An Autonomous Institution affiliated to VTU, Belagavi)***Fifth Semester, B.E. - Information Science and Engineering****Semester End Examination; Feb. - 2021****Python Programming**

Time: 3 hrs

Max. Marks: 100

Note: I) PART - A is compulsory. Two marks for each question.**II) PART - B: Answer any Two sub questions (from a, b, c) for Maximum of 18 marks from each unit.**

Q. No.	Questions	Marks
I : PART - A		10

- I a. What is wrong in the statement: `1_Singer = 'Sonu Nigam'?` 2
- b. Find the error;
`var1 = "Good"`
`def show():`
`var2 = "Morning"`
`print(var1)` 2
`print(var2)`
`show()`
`print(var1)`
`print(var2)`
- c. Consider the list, `list = [1, 7, 9, 12, 16]`. Give the output of the following commands: 2
 i) `list[0:3]` ii) `list[0:-1]`
- d. Define class. How do you define it? 2
- e. Write the syntax to write "welcome to python" in a file. 2

II : PART - B **90****UNIT - I** **18**

- 1 a. Define python. Describe its features and applications. 9
- b. Explain the rules of precedence used by python to evaluate an expression. 9
- c. I) Write a python program to calculate electricity bill based on the following information: 9

Consumption unit	Rate of Charge	Additional charges	
1 - 100	Rs. 1.5	if units <= 100 – 25.00	
101 - 200	Rs. 2.5	if 100 < units and units <= 200 – 50.00	5
201 - 300	Rs. 4	if 200 < units and units <= 300 – 75.00	
301 - 350	Rs. 5	if 300 < units and units <= 350 – 100.00	
Above 350	Fixed charge Rs. 1500	if units above 350 – No additional charges	

II) Explain string slicing in python. Show with the example. 4

UNIT - II **18**

- 2 a. Distinguish between user defined function and lambda function. What are the characteristics of a lambda function? Give an example. 9

- b. Consider the following string mySubject:
 mySubject = "Computer Science"
 What will be the output of the following string operations :
- i) print(mySubject[0:len(mySubject)])
 - ii) print(mySubject[-7:-1])
 - iii) print(mySubject[::2])
 - iv) print(mySubject[len(mySubject)-1])
 - v) print(2*mySubject)
 - vi) print(mySubject[::-2])
 - vii) print(mySubject[:3] + mySubject[3:])
 - viii) print(mySubject.swapcase())
 - ix) print(mySubject.startswith('Comp'))
- c. With example, explain any six built in functions used for string manipulation. 9

UNIT - III **18**

- 3 a. I) Make a list of first ten letters of the alphabet, then using the slice operation do the following operations:
- i) Print the first three letters from the list 3
 - ii) Print any three letters from the middle
 - iii) Print the letters from any particular index to the end of the list
- II) How are tuple a useful data structure? Explain. 6
- b. With the example, explain the concept of list comprehension and dictionary comprehension. 9
- c. Differentiate between the following with example:
- i) append() and insert() methods of list 9
 - ii) pop() and remove() methods of list
 - iii) pop() and remove() methods of sets

UNIT - IV **18**

- 4 a. List and explain any two different object oriented features supported by python. 9
- b. Write python program to simulate a bank account with support for depositMoney, withdrawMoney and showBalance operations. 9
- c. Discuss inheritance in python programming language. Write a python program to demonstrate the use of super() function. 9

UNIT - V **18**

- 5 a. Define error and exception. Distinguish between these two features. 9
- b. Discuss any three techniques used for reading files in detail. 9
- c. Appraise the use of try block and except block in python with syntax. 9

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