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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Computer Science and Engineering

Semester End Examination; July - 2021

Python Programming

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Write a python program to convert a decimal number to a binary number. 7
- b. Define a function is_Prime() that return 1 if the argument passed to is a prime number and 0 otherwise. Write a python program to check whether a given number is prime or not. 7
- c. Explain any six built-in string methods with example. 6
- 2 a. With example, explain the use of variable length arguments in a function with example. 6
- b. Explain the concept of Lambda function with an appropriate example. 6
- c. Write a python program to parse an email-id to print from which server it was sent. 8
- 3 a. Write a python program that prompts user to enter number. Once the user enters -1, it displays the count, sum and average of even and that of odd numbers. 7
- b. With syntax and example explain if-else, if-elif-else and nested if-else statements. 6
- c. With example, explain string comparison operators. 7
- 4 a. Write a python program to count the occurrences of a character in a string without using built-in function. 7
- b. Write a python program to read a character until a * is encountered. Also count the number of uppercase, lowercase and digits entered by the user. 7
- c. With example, explain for loop and variations in range() function. 6
- 5 a. With example, illustrate any seven basic operations on tuples. 7
- b. Write a python program to find whether a particular element is present in the list using a loop. 7
- c. Write a python program to store squares of numbers from 1 and 10 in a list. Using this as input, compute the sum of squares. 6
- 6 a. Write a python program to find the largest element in the list. 7
- b. With example, illustrate any six methods of lists. 7
- c. Write a python program to remove all duplicates from the list. 6
- 7 a. Define Dictionary data structure. With syntax and example explain the creation of Dictionary. 6
- b. Write a python program to generate a set of prime numbers and another set of odd numbers. Demonstrate use of any three set operations on the above sets. 7

- c. Write a python program with class employee that keeps track of numbers of employee in an organization and also store their name, designation and salary details. Define methods to read employee details from the keyboard and display them. 7
- 8 a. With example, explain any six operations of sets. 6
- b. With syntax and example, explain the following concepts related to OOPS:
- i) Creating objects 8
 - ii) Private variables
 - iii) Class variables and object variables
- c. Write a python program to generate Fibonacci series using dictionary. 6
- 9 a. With syntax, explain the following file handling methods:
- i) open() 8
 - ii) close()
 - iii) write()
- b. List out the structured file formats used in structured text files and explain with example. 6
- c. Write a python program to count number of lines in a text file. 6
- 10 a. Write a python program to perform the following file operations:
Travers a path and display all the files and subdirectories in each level till the deepest level for a given path. Also display the total number of files and subdirectories. 8
- b. With syntax and example explain seek() function. 6
- c. List and explain structured binary files. 6

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