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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **B.C.A - III SEMESTER** |
| **SEMESTER EXAMINATION: OCTOBER 2021****(Examination conducted in January-March2022)** |
| **CA 3118 - Object Oriented Programming using Python** |
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| **Time- 2 1/2 hrs** |  | **Max Marks-70** |
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| **This paper contains three printed pages and three parts****PART A****Answer All the Questions. 10 \* 2=20**1. Explain the following:

a)interactive mode b) modulus operator1. Present the flow of execution for a while statement.
2. Write an algorithm to find the minimum number in a given list of numbers.
3. State the reasons to divide programs into functions.
4. What is a module? Give an example.
5. Which keyword is used for function in Python language?

a)functionb) defc) fund) define  7. What will be the output of the following Python code? i = 1 while True: if i%3 == 0: break print(i)  i + = 1a) 1 2 3b) errorc) 1 2d) none of the mentioned8. Python supports the creation of anonymous functions at runtime, using a construct called \_\_\_\_\_\_\_\_\_\_a) pib) anonymousc) lambdad) none of the mentioned9. What are the values of the following Python expressions? 2\*\*(3\*\*2) (2\*\*3)\*\*2 2\*\*3\*\*2a) 512, 64, 512b) 512, 512, 512c) 64, 512, 64d) 64, 64, 6410. Which of the following is not a core data type in Python programming?a) Tuplesb) Listsc) Classd) Dictionary**PART B****Answer any FIVE. 5\*6=30**11. Compare and contrast tuples and lists in Python.12. Explain the use of slice operator for accessing elements of a tuple.13. Identify the exception that will be raised by the following code.Justify your answer.i) import mathprint("\nPower =", math.power(10,2))ii) x = 10y = '10'print (x + y)iii) s = "BScCS"for i in range(len(s)):print(s[i+1])iv) x = int(input(“Enter a Number:”)print(x)14. a) Explain how string can be traversed through looping statement? (3+3 marks) b) Write a Python program to display a given substring in the main string.15. What is multilevel inheritance? Write a program to implement multilevel inheritance.16. Explain replace () and match() methods of regular expression with suitable examples. (3+3 marks)17. Create a module “Area.py” with functions area\_circle(), area\_triangle() and area\_rect(). **PART C****Answer any TWO. 2\*10=20**18. a) Compare and contrast sets with Dictionary. (5 Marks+ 5 Marks) b) Explain the following operations i)sum of two tuples ii)comparison of two tuples19. How class can be instantiated in Python? Write a Python program to express instances as return values to define a class RECTANGLE with members width, height, corner\_X, corner\_Y and member function: to find centre, area and perimeter of a rectangle.20. a) What is operator overloading? Write Python code to overload “+” Operator by providing the method \_\_add\_\_. (5 Marks) b) Explain extracting data using Regular expressions with suitable example. (5 Marks)+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++ |
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