DAYANANDA SAGAR COLLEGE OF ENGINEERING

Date: 13/4/2018 Marks: 50

	Marks	LL	CO
1. Apply Runge-kutta method of 4th order, to compute y(0.2). Given that 10 dy/dx=x^2+y^2 ,y(0)=1 by taking h=0.1.	10	6	5
2. Explain the following (i)Null hypothesis (ii)Alternative hypothesis (iii)Type I and type II error (iv)Level of significance (v)Standard error	10	3	2
3. For any three sets A, B and C, Prove that i)(A ∆ B)=(B ∩A')U(A∩B')=(B-A)U(A-B) ii)(A∩B)U(A∩B∩C'∩D)U(A'∩B)=B.	10	3	1
4. Solve by Euler's modified method to obtain y(1.2) given dy/dx= (y+x)/(y-x) ,y(1)=2. Using step size h=0.2.	10	1	2
5. A random variable (X=x) has the following probability distributions x 0 1 2 3 4 5 6 7 P(x) 0 k 2k 2k 3k k^2 2k^2 (7k^2)+k Find: (i) k (ii) p(x<6) (iii) p(x>6) (iv) Mean. Also find the probability distribution and distribution function of x.	10	4	2

CO	Statement
1	Use the core python scripting concepts like control statements, string manipulation functions and the built-in data structures like list and dictionary.
2	Be able to design, code and test small python programs that make use of functions.
3	Demonstrate usage of file handling and pattern matching using regular expressions.
4	Build GUI for applications using python libraries.
5	Demonstrate MySQL database connectivity using python scripting.
6	Apply the knowledge of python and use the language scripting elements and constructs, data structures, and repository of standard library, to develop real world applications.