DAYANANDA SAGAR COLLEGE OF ENGINEERING

Date: 7/4/2018 Marks: 50

	Marks	LL	CO
1. 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
2. Obtain y(0.2) using Picard's method up to second approximation for the initial value problem dy/dx = x2 – 2y , y(0) = 1	6	5	6
3. Find the memory address of the next instruction to be executed by the microprocessor, when operated in the real mode, for the following CS:IP combinations: i)CS=1000H and IP=2000H ii)CS=2300H and IP=1A00H	10	2	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.	7	1	2
5. Define a system call with an example of how they are used	10	3	1
6. What are system calls? With examples explain different categories of system calls.	7	5	4

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.