DAYANANDA SAGAR COLLEGE OF ENGINEERING

Date: 13/4/2018 Marks: 50

	Marks	LL	CO
1. If dy/dx=xy+y^2; y(0)=1, y(0.1)=1.1169, y(0.2)=1.2773, y(0.3)=1.5049 Find y(0.4) correct to three decimal places, using the Milne's predictor – corrector method. Apply the corrector formulae twice.	10	6	2
2. If A,B,C are finite sets Prove the extended addition principle.	10	4	2
3. Examine whether the given compound proposition is a tautology [(pvq)→r] ↔[~r→ ~(pvq)]	10	4	3
4. The weights of 1500 ball bearings are normally distributed with a mean of 635 gms and S.D of 1.36gms. If 300 random samples of size are drawn from this population , determine the expected mean and S.D of the sampling distribution of means if sampling is done a) with replacement b) without replacement.	10	3	3
5. Obtain y(0.2) using Picard's method up to second approximation for the initial value problem dy/dx=x^2-2y ,y(0)=1.	10	6	6

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.