BRANCH	**CSE**
SESSION	

SAGAR INSTITUTE OF SCIENCE & TECHNOLOGY(SISTec)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ASSIGNMENTS-1

NAME OF THE FACULTY:
SUBJECT/CODE :

Sr. No.	Enrollment No.	Set Number
1	0187CE201038,40,76,95,0187cs201002,03	SET-1
2	0187cs201004,05,06,07,09,10	SET-2
3	0187cs201011,12,13,15,16, 17	SET-3
4	0187cs201019,20,21,22,23,24	SET-4
5	0187cs201025,26,27,28,29,30	SET-5
6	0187cs201031,32,34,35,36,38	SET-6
7	0187cs201039,40,41,43,44,45	SET-7
8	0187cs201047,48,51,52,53,54	SET-8
9	0187cs201055,56,58,59,60,61	SET-9
10	0187cs201062,63,0536cs2012,14,41,60	SET-10

UNIT-1

<table>
<tr><th>Q No.</th><th>QUESTIONS</th><th>Bloom's Taxonomy Level</th><th>Course Outcomes</th></tr>
<tr><td colspan="3">SET 1</td><td></td></tr>
<tr><td>1.</td><td>Define Machine Learning. What are the applications of Machine Learning?</td><td>1(Remembering)</td><td>CO1</td></tr>
<tr><td>2.</td><td>Why central tendency is important? Contrast three different ways of defining the center of a distribution.</td><td>1(Remembering)</td><td>CO1</td></tr>
<tr><td>3.</td><td>Consider the falling set points{(1,3)(2,4),(3,5),(4,7)}
(a) Find the parameters corresponding to Linear Regression so as to get the least squared error.
(b)Plot the given points & the regression line.</td><td>3(Applying)</td><td>CO1</td></tr>
<tr><td colspan="3">SET 2</td><td></td></tr>
<tr><td>1.</td><td>Classify Machine Learning on the basis of human supervision.</td><td>2(Understanding)</td><td>CO1</td></tr>
<tr><td>2.</td><td>Compare various types of data distribution. Why it is important for the data analytics?</td><td>2(Understanding)</td><td>CO1</td></tr>
<tr><td>3.</td><td>The values of independent variable x and dependent value y are given below:
<table><tr><td>X</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Y</td><td>2</td><td>3</td><td>5</td><td>4</td><td>6</td></tr></table>Find the least square regression line y = ax + b. Estimate the value of y when x is 10.</td><td>3(Applying)</td><td>CO1</td></tr>
<tr><td colspan="3">SET 3</td><td></td></tr>
<tr><td>1.</td><td>What is a random variable? Discuss Probability Distribution.</td><td>1(REMEMBERING)</td><td>CO1</td></tr>
<tr><td>2.</td><td>Why convex optimization is important? Also discuss the cost function of linear regression.</td><td>1(REMEMBERING)</td><td>CO1</td></tr>
<tr><td>3.</td><td>Consider the falling set points{(1,3)(2,4),(3,5),(4,7)}
(a) Find the parameters corresponding to Linear Regression so as to get the least squared error.
(b)Plot the given points & the regression line..</td><td>3(Applying)</td><td>CO1</td></tr>
<tr><td colspan="3">SET 4</td><td></td></tr>
<tr><td>1.</td><td>Choose and Illustrate a scenario where reinforcement learning is the first choice of a developer. Also specify why?</td><td>2(Understanding)</td><td>CO1</td></tr>
<tr><td>2.</td><td>What are the differences between regression and classification? Explain with help of an example.</td><td>1(Remembering)</td><td>CO1</td></tr>
<tr><td>3.</td><td>The values of independent variable x and dependent value y are given below:
<table><tr><td>X</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Y</td><td>2</td><td>3</td><td>5</td><td>4</td><td>6</td></tr></table>Find the least square regression line y = ax + b. Estimate the value of y when x is 10.</td><td>3(Applying)</td><td>CO1</td></tr>
</table>

	SET 5		
1.	**Explain stepwise flow of Machine Learning Approach. Also Compare Machine Learning approach with the traditional approach for solving a problem.**	1(Remembering)	CO1
2.	**What do you mean by Overfitting and Underfitting. Explain with the help of an example.**	1(Remembering)	CO1
3.	**Consider the falling set points{(1,3)(2,4),(3,5),(4,7)}** **(a) Find the parameters corresponding to Linear Regression so as to get the least squared error.** **(b)Plot the given points & the regression line.**	3(Applying)	CO1
	SET 6		
1.	**What are the design issues and approaches to machine learning?**	1(Remembering)	CO1
2.	**Define statistical theory and how it performed in machine learning**	1(Remembering)	CO1
3.	**The values of independent variable x and dependent value y are given below:** X 0 1 2 3 4 Y 2 3 5 4 6 **Find the least square regression line y = ax + b. Estimate the value of y when x is 10.**	3(Applying)	CO1
	SET 7		
1.	**Differentiate between Training data and Testing data.**	2(Understanding)	CO1
2.	**What do you mean by Gradient Descent?**	1(Remembering)	CO1
3.	**Consider the falling set points{(1,3)(2,4),(3,5),(4,7)}** **(a) Find the parameters corresponding to Linear Regression so as to get the least squared error.** **(b)Plot the given points & the regression line..**	3(Applying)	CO1
	SET 8		
1.	**Explain in details Principal component analysis for dimension reduction**	1(Remembering)	CO1
2.	**Explain Normal or Gaussian distribution with an example.**	1(Remembering)	CO1
3.	**The values of independent variable x and dependent value y are given below:** X 0 1 2 3 4 Y 2 3 5 4 6 **Find the least square regression line y = ax + b. Estimate the value of y when x is 10.**	3(Applying)	CO1
	SET 9		
1.	**Differentiate between supervised, unsupervised and reinforcement learning with example**	2(Understanding)	CO1
2.	**Define Machine Learning. What are the applications of Machine Learning?**	1(Remembering)	CO1

3.	**Consider the falling set points{(1,3)(2,4),(3,5),(4,7)}** **(a) Find the parameters corresponding to Linear Regression so as to get the squared error.** **Plot the given points & the regression line in the same rectangular system axex**	3(Applying)	CO1
	SET 10		
1.	**Compare various types of data distribution. Why it is important for the data analytics?**	2(Understanding)	CO1
2.	**What is a random variable? Discuss Probability Distribution.**	1(Remembering)	CO1
3.	**The values of independent variable x and dependent value y are given below:** X 0 1 2 3 4 Y 2 3 5 4 6 **Find the least square regression line y = ax + b. Estimate the value of y when x i**	3(Applying)	CO1