School of Computer Science Engineering and Technology

Course- B.TECH	Type- AI Core-1
Course Code- **CSET211**	Course Name- **Statistical Machine Learning**
Year- Second	Semester- ODD
Date- 19/09/2022	Batch- CSE 3rd Semester

Lab Assignment (19st Sep – 23rd Sep 2022)

Lab 6 – SVM classifier and minimax algorithm (2 marks)

Objective: Student will be able to learn how to implement support vector machine classifier with different hyper parameters and implement minimax algorithm.

Exp. No.	Name	CO1	CO2	CO3
03	SVM classifier and Minimax algorithm			✓

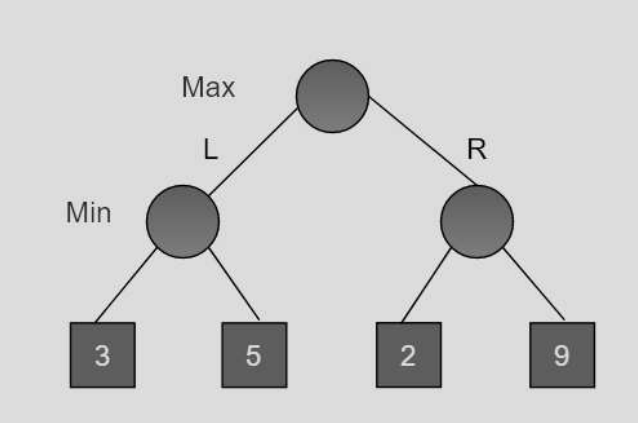
Question -1: Marks: 1, Time: 45 min

Consider the dataset "Blood Transfusion Service Center Data Set"

1. **Perform the required pre processing**
2. **Split the dataset into training and test data.**
3. **Create a model by support vector machine classifier with "Linear" kernel and Fit the Data.**
1. **Predict the test data**
2. **Estimate the classification report**
3. **Make confusion matrix on the predicted data.**

Question -2: **Marks: 1, Time: 45 min**

Consider the following game tree.



1. **Find the optimal move to Maximizer to get the maximum points by implementing Minimax algorithm.**
2. **Print the optimum value by maximizer.**

Question -3: Practice question

Consider the dataset "**iris.csv**", includes three iris species with 50 samples each as well as some properties about each flower. Classify the species of a flower using SVM classifier with linear classifier.