1.
Source: - https://www.youtube.com/watch?v=wpQiEHYkBys

As per the YouTube video the definition of evaluation metric is a way to quantify the performance of a machine learning model. By elevation metrics is used on the trained AI model to get the result and also from the video I understood that the elevation metric is not same as loss function.
2. The learning metrics which are stated in the video are: Accuarcy, precision, recall, F1 score and Matthews Correlation. Mean Absolute Error (MAE), R-squared (R2), Mean Squared Error (MSE), Root Mean Squared Error (RMSE), Mean Squared Logarithmic Error (MSLE), and Root Mean Squared Logarithmic Error (RMSLE) are the key evaluation metrics you mentioned for regression projects. By assessing the discrepancy between predicted and actual values, these metrics aid in evaluating the precision and fit of regression models.
Source: - https://www.youtube.com/watch?v=wpQiEHYkBys

3. MCC stands for Matthew's correlation coefficient. The main characteristic of it is that it considers all the four cells of confusion matrix. And the four cells of confusion matrix are: true positives, true negatives, false positives, and false negatives. And provides the single metric to access overall performance the models which are having the unbalanced datasets. And it classifies the predications on the scale of -1 to 1 , (1 indicates perfection, o indicates randomness and -1 indicates complete disagreement)

Source: - https://www.youtube.com/watch?v=wpQiEHYkBys

4.
Linear regression, logistic regression, decision trees, and random forests are indeed among the most popular machine learning algorithms. They are widely used due to their technical merits and versatility. Linear regression is commonly employed for regression tasks, while decision trees serve both classification and regression purposes. Logistic regression is favored for binary classification tasks. Random forests, as an ensemble method combining decision trees, offer robustness and the ability to handle complex interactions. These algorithms strike a balance between performance, simplicity, and interpretability, making them suitable for a wide range of applications.
Source:https://medium.datadriveninvestor.com/the-most-popular-machine-learning-algorithms-explained-57ed0e1dafaa

5. Linear regression is the most easiest algorithm to understand. By using linear regression we can anything, because it will be used in various applications like weather forecasting, sales forecasting, trends in society, and we do the predictive analysis which is very useful in upcoming generations.
Source:https://medium.datadriveninvestor.com/the-most-popular-machine-learning-algorithms-explained-57ed0e1dafaa

6.
1. Linear models, 2. Decision trees, 3. Ruel-based models, 4. Naïve bayes, 5. K-Nearest neighbors, 6. Interactive Models, Bayesian networks.
This seven are selected because these models are interpretable and belong to the hypothesis space. And also they are interpretable by nature.
Source: - Burkart, N., & Huber, M. F. (2021). A survey on the explainability of supervised machine learning. Journal of Artificial Intelligence Research, 70, 245-317. https://www.jair.org/index.php/jair/article/download/12228/26647

7. the two questions are:

1. what are we actually looking for?

2. do we really need a black box model?

The author encourages data scientists to reevaluate the prevalence of black box models and consider the advantages of interpretable models. In some situations, transparency and explainability are essential for improving understanding of trade-offs and fostering the development of more approachable machine learning techniques.

Source: - Burkart, N., & Huber, M. F. (2021). A survey on the explainability of supervised machine learning. Journal of Artificial Intelligence Research, 70, 245-317. https://www.jair.org/index.php/jair/article/download/12228/26647