1. **Which of the following best describes a confusion matrix?**  
   a) Data preprocessing tool  
   b) A summary of prediction results  
   c) A clustering technique  
   d) A type of neural network
2. **In a binary classification, what does True Positive (TP) mean?**  
   a) Predicted positive, actually negative  
   b) Predicted negative, actually positive  
   c) Predicted positive, actually positive  
   d) Predicted negative, actually negative
3. **What does False Negative (FN) indicate?**  
   a) Model correctly predicted positive  
   b) Model missed predicting a positive  
   c) Model incorrectly predicted a negative as positive  
   d) None of the above
4. **Precision is calculated as:**  
   a) TP / (TP + FN)  
   b) TP / (TP + FP)  
   c) TP / (TP + TN)  
   d) (TP + TN) / Total
5. **Which metric is more important when the cost of missing a positive case is high?**  
   a) Precision  
   b) Recall  
   c) Accuracy  
   d) Specificity
6. **A high false positive rate is critical in:**  
   a) Spam detection  
   b) Fraud detection  
   c) Email classification  
   d) Sentiment analysis
7. **In a medical diagnosis system, a false negative can mean:**  
   a) False alarm  
   b) Missed disease detection  
   c) Correct healthy prediction  
   d) None of the above
8. **What metric gives a balance between precision and recall?**  
   a) Specificity  
   b) F1-score  
   c) Accuracy  
   d) ROC curve
9. **If a model has 100% precision, then:**  
   a) All positive predictions are correct  
   b) All actual positives are predicted  
   c) No false positives exist  
   d) Both a and c
10. **The ideal confusion matrix has:**  
    a) High FP and FN  
    b) All values in TP and TN  
    c) High FP and TP  
    d) Low TP and high FN