Appraisal of Binary Classification

1. With reference to the table above, define each of the following appraisal metrics (*1 Mark for each*).

	Predicted Negative	Predicted Positive
Observed Negative	True Negative	False Positive
Observed Positive	False Negative	True Positive

   a. Accuracy

   b. Precision

   c. Recall

2. What is the F-score? Explain its function and how it is computed.

3. Define Specificity and Sensitivity. You make reference to previous answers.

4. What is a ROC curve? Explain its function, how it is determined, and the means of interpreting the curve. Support your answer with a sketch.

5. For following binary classification outcome table, calculate the following appraisal metrics.

   (i.) (1 Mark) Accuracy;

   (ii.) (1 Mark) Recall;

   (iii.) (1 Mark) Precision;

   (iv.) (1 Mark) F-measure.

	Predict Negative	Predict Positive
Observed Negative	9530	10
Observed Positive	300	160

6. (2 Marks) Explain why the F-measure is considered a more informative measure of performance than the Accuracy score.

7. What is a ROC curve? Explain its function, how it is determined, and the means of interpreting the curve. Support your answer with a sketchs.