Name Date

Performance metrics-accuracy, precision, recall, sensitivity, specificity, AUC, RoC

1. In medical application domain ,suppose we build a classifier for patient screening for disease X what type of confusion matrix your model should produce *points: 1*

- ◯ FP>>FN
- ◯ FN>>FP
- ◯ TN>>FP
- ◯ all of the above

2. Suppose that there are a total of 50 data mining related documents in a library of 200 documents.suppose that a search engine retrieves 10 documents after a user enters a"data mining query of which 5 are data mining related documents.what are precision and recall. *points: 1*

- ◯ 5%,10%
- ◯ 50%,10%
- ◯ 10%,5%
- ◯ 10%,50%

3. A data set consists 19000 examples 1000 of class A 1000 of class B and 17000 of class C a data scientist develops a classification model say model 1 to classify class A from rest of the class and reports 80% accuracy in performance report. The client asks to modify the model to classify class C from the other class and gets a report of 95% accuracy for the new model 1. which of the below options you can be more confident *points: 1*

- ◯ model 2 is better then model 1
- ◯ both models are equally best
- ◯ model 1 is better then model 2
- ◯ both model are poor in performance

4. A model A gives out the following data TP=60,recall=0.46,FP=40 ,model B gives TP=80 ,recall =0.65,FP=20 for a data set with 200 examples. assume that both model shows linear behaviour for ROC curve and TPR=0 when FPR=0, which model would you prefer *points: 1*

- ◯ model 1
- ◯ model 2
- ◯ both are equally better
- ◯ not enough information,to decide

5. A 3-class classifier model is developed for class={A,B,C} with precision of 16.66% and recall 83% for class A the model is used for application and used for N data and following conclusions are made 1.nearly 1/6 of the data that our classifier predicts as class A is actually class A 2..nearly 5/6 of the data that our classifier predicts as class A is actually class A 3.our classifier predicted 1/6 of the class A data as class A 4.our classifier predicted 5/6 of the class A data as class A *points: 1*

- ○ only 1 is true
- ○ for given test ,either 1 is true or 3 is true
- ○ both 1 and 4 are true
- ○ non of them are true