

SGN-2556 Pattern Recognition

Exam 1: 24.5.2010/J. Vihonen and A. Visa

No calculators are allowed

- 1) Explain the sources of error in the case of a two-class classifier. Then compare the Bayes classifier error rate and the Neyman-Pearson constraint.
- 2) It is essential to use a priori information in pattern recognition. How this can be done by using Fuzzy Logic? Describe your approach. Discuss the pros and cons concerning your approach.
- 3) You have 20 labeled samples for training and testing. How do you evaluate the accuracy of the classifier? Motivate your answer.
- 4) Compare the supervised and unsupervised Bayesian learning when a relatively small number of training data is available.