EECS 837

Homework Assignment # 1

due: September 12, 2019

1. For the following decision table

	Attributes				Decision
	Size	Color	Feel	Temperature	Attitude
1	big	yellow	soft	low	positive
2	big	yellow	hard	high	negative
3	medium	yellow	soft	high	positive
4	medium	blue	hard	high	positive
5	medium	blue	hard	high	positive
6	medium	blue	soft	low	negative
7	big	blue	hard	low	so-so
8	big	blue	hard	high	so-so

determine sets of rules by using *conceptual variables* and

35 pts. (a) a *single global covering* for each conceptual variable and then *linear dropping condition* technique (i.e., by the **LEM1** algorithm),

35 pts (b) *all global coverings* for each conceptual variable and then *linear dropping condition* technique.

2. For the above decision table give a rule set example that is

15 pts. (a) complete but not consistent,

15 pts. (b) neither complete nor consistent.

A rule set *R* is *consistent* if and only if every rule from *R* is consistent with the data set (decision table). A rule set *R* is *complete* if and only if every concept from the data set is completely covered by *R*.