**CST8390 - Lab 7 Answer Document**

**Regression**

1

a. Number of instances: 513

b. Number of attributes: 13 continuous attributes (including "class" attribute "MEDV"), 1 binary-valued attribute.

c. Attribute information

1. CRIM per capita crime rate by town

2. ZN proportion of residential land zoned for lots over 25,000 sq.ft.

3. INDUS proportion of non-retail business acres per town

4. CHAS Charles River dummy variable (= 1 if tract bounds river; 0 otherwise)

5. NOX nitric oxides concentration (parts per 10 million)

6. RM average number of rooms per dwelling

7. AGE proportion of owner-occupied units built prior to 1940

8. DIS weighted distances to five Boston employment centres

9. RAD index of accessibility to radial highways

10. TAX full-value property-tax rate per $10,000

11. PTRATIO pupil-teacher ratio by town

12. B 1000(Bk - 0.63)^2 where Bk is the proportion of blacks by town

13. LSTAT % lower status of the population

14. MEDV Median value of owner-occupied homes in $1000's

2

a. 21.1

b. 8.704

c. 0.33169

3

1. (Median value of owner-occupied homes in $1000's)  
   class =

-0.0914 \* CRIM +

0.0577 \* ZN +

-0.0931 \* INDUS +

2.8323 \* CHAS=1 +

-72.568 \* NOX +

2.5705 \* RM +

-1.2806 \* DIS +

0.2532 \* RAD +

-0.0132 \* TAX +

-0.7959 \* PTRATIO +

0.0094 \* B +

-0.6428 \* LSTAT +

65.9273

b.

Charles River dummy variable

2.8323 \* CHAS=1 +

average number of rooms per dwelling

2.5705 \* RM +

c.

nitric oxides concentration (parts per 10 million)

-72.568 \* NOX +

weighted distances to five Boston employment centres

-1.2806 \* DIS +