Graded Quiz: Model Development

TOTAL POINTS 5

1. If the predicted function is: 1 point

$$\hat{y} = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4$$

The method is:

- ○ Polynomial Regression
- ◉ Multiple Linear Regression

2. What steps do the following lines of code perform? 1 point

```
Input=[('scale',StandardScaler()),('model',LinearRegression())]

pipe=Pipeline(Input)

pipe.fit(Z,y)

ypipe=pipe.predict(Z)
```

```
7   ypipe=pipe.predict(Z)
```

- ○ Standardize the data, then perform a polynomial transform on the features **Z**
- ○ Find the correlation between **Z** and **y**
- ◉ Standardize the data, then perform a prediction using a linear regression model using the features **Z** and targets **y**

3. If **X** is a dataframe with 100 rows and 5 columns, and **y** is the target with 100 samples, and assuming all the relevant libraries and data have been imported, and the following line of code has been executed: 1 point

```
1   LR = LinearRegression()
2
3   LR.fit(X, y)
4
5   yhat = LR.predict(X)
```

How many samples does **yhat** contain?

- ○ 5
- ◉ 100
- ○ 500

- [ ] 5
- [x] 100
- [ ] 500

4. What value of **R^2** (coefficient of determination) indicates your model performs best? 1 point

- [ ] -1
- [x] 1
- [ ] 0

5. Consider the following equation: 1 point

$$y = b_0 + b_1 x$$

The variable **y** is what?

- [ ] The predictor or independent variable
- [ ] The intercept
- [x] The target or dependent variable