INSTITUTE OF ACTUARIAL & QUANTITATIVE STUDIES

Subject: Actuarial Model

Chapter: Unit 1&2

Category: Practice Questions 1

1. Which are key forms of Data Analysis.

a) Descriptive

b) Inferential

c) Predictive

d) All of the above

2. Which is the special case of the stochastic model.

a) deterministic

b) proxy

c) Indeterministic

d) Monte Carlo Simulations

3. Models rely heavily on which factor

a) Objective function

b) data

c) program

d) parameters

4. Explanatory variables, are not referred to as

a) Independent

b) predictors

c) correlated

d) regressors.

5. Advantages of Non-linear Regression is

a) broad range of functions can be fit

b) iterative method

c) extracting maximum information

d) data points of varying quality can be used

6. Estimates of the coefficients could be

a) efficient

b) consistent

c) inefficient

d) sufficient

7. Residuals are:

a) potential outliers

b) response variables

c) explanatory variables

d) independent variables

8. which one is not an advantage of Weighted least square method

a) Estimating weights can have predictable results

b) data points of varying quality can be used

c) extracting maximum information from small data sets.

d) Sensitivity to outlier

9. Data best reflects the population via biased sampling

a) True

b) False

c) Partially true

d) Can’t say

10. Errors follow which distribution

a) Normal

b) Standard Normal

c) Independent Normal

d) Log Normal

11) Discuss the weighted least squares regression method.

12) Describe predictive data analysis briefly.

13) Discuss how to assess the suitability of a model.

14) A proxy model may be used to replace Monte Carlo simulation. Discuss.

15) Discuss the assumption that random errors have a constant standard deviation.

16) What are some of the different statistical methods for model building?

17) A company is manufacturing disposable tableware such as paper plates and napkins. To predict future sales the company needs to build a model that will analyze past data and use this to predict future results.

(i) which all model components are required?

(ii) form a model using the above components.

18)

(i) Briefly talk about data analysis and its applications.

(ii) To provide Analysis & Conclusions for a given population, one uses which technique? state it's limitations.