Multiple Choice Questions – Quiz 1

1. Fill in the missing words to the quote: “Statistical methods may be described as methods for drawing conclusions about .......... based on ............ computed from the ..................”
(a) statistics, samples, populations
(b) populations, parameters, samples
(c) statistics, parameters, samples
(d) parameters, statistics, populations
(e) populations, statistics, samples

2. Consider the following statement concerned with the collection of data, and determine the best selection of terms to complete the statement: “The entire group of objects or people about which information is wanted is called the..................... . Individual members are called............. The .................is the part that is actually examined in order to gather information.”
(a) population, explanatory variables, subgroup
(b) whole, items of interest, stratum
(c) response group, respondents, nonresponse group
(d) sample, units, target population
(e) population, units, sample

3. In an experiment to determine if antibiotics increase the final dressed weight of cattle, the following were measured on each animal in the study: sex, initial weight, weight gain, grade of meat. where grade is recorded as (A, B, or C). The scale of measurement of these variable are:
(a) Nominal, ratio, interval, nominal
(b) Nominal, ratio, ratio, nominal
(c) Nominal, ratio, ratio, ordinal
(d) Ordinal, ratio, ratio, ordinal
(e) Ordinal, ratio, ratio, nominal

4. In an aquaculture study, the following variables were measured on each fish:
sex, initial weight(g), body temperature (°C), weight gain(g).
The scale of these four variables (in order) are:
(a) Nominal, ratio, ratio, ratio
(b) Nominal, ratio, interval, interval
(c) Ordinal, ratio, interval, ratio
(d) Nominal, ratio, interval, ratio
(e) Ordinal, interval, ratio, interval

5. A study was conducted to investigate the effect of a coal-fire generating plant upon the water quality of a river. As part of an environmental impact study, fish were captured, tagged, and released. The following information was recorded for each fish: sex(0=female, 1=male), length(cm), maturation (0=young, 1=adult), weight(g).
The scale of these variables is:
(a) nominal, ratio, nominal, ratio
(b) nominal, interval, ordinal, ratio
(c) nominal, ratio, ordinal, ratio
(d) ordinal, ratio, nominal, ratio
(e) ordinal, interval, ordinal, ratio

6. As part of a study to investigate the effects of stubble burning, the following variables were measured at several sites around Winnipeg:
pH of soil (to one decimal place, e.g., 6.3); crop grown (0=wheat, 1=barley, 2=oats, 3=other); amount of stubble (0=light, 1=medium, 2=heavy); date of final harvesting (eg., 10 Oct 92).
The scales of these variables are:
(a) interval, ordinal, ratio, ratio
(b) interval, nominal, nominal, interval
(c) interval, nominal, ordinal, interval
(d) ratio, ordinal, ordinal, ratio
(e) interval, nominal, ordinal, ratio

7. An experiment was performed upon rats to investigate the effect of ingesting Alar (a chemical sprayed on apple trees to keep fruit from dropping before ripe) upon subsequent cancer rates. The following variables were measured:
gender (0=female, 1=male); weight (g);
dose of Alar (nil, low, high);
number of tumors
The typical weight of a rat is about 800 g and the weights were rounded to the nearest gram. The number of tumors is around 10. Which of the following is FALSE?
(a) Gender is nominal scale; dose is ordinal scale
(b) Gender is discrete; weight is continuous
(c) Number of tumors is discrete and is interval scale
(d) Dose is ordinal scale and discrete
(e) Weight is ratio scale; and number of tumors is discrete.

8. A random sample of 500 households in Vancouver was selected and several variables are recorded for each household. Which of the following is NOT CORRECT?
(a) Household total income is a ratio scaled variable.
(b) Household income (which averages about $35,000) and was rounded to the nearest $100 can be treated as a continuous variable even though it is “discrete”.
(c) Socioeconomic status was coded as 1=low income, 2=middle income, 3=high income and is an interval scaled variable.
(d) The primary language used at home is a nominal scaled variable.
(e) The number of persons in the household is a discrete variable.