1) The salaries of the coaches in the NFL is an example of what level of measurement?
   a) Nominal    b) Ordinal    c) Interval    d) Ratio    e) NOTA

2) An automobile dealer wants to construct a pie graph to represent types of cars sold. A total of 72 cars were sold, of which 16 were convertibles. How many degrees should be used for the convertibles section?
   a) 50    b) 100    c) 60    d) 80    e) NOTA

3) The size of the box in a boxplot represents what about the data set?
   a) Skewness    b) Variance    c) Standard deviation    d) Interquartile range    e) NOTA

4) If a data set contains outliers, what would be the most appropriate measure of central tendency?
   a) Mean    b) Median    c) Mode    d) Midrange    e) NOTA

5) Given that the mean and standard deviation of a data set are 25 and 3, what is the coefficient of variation?
   a) .12    b) 12%    c) 8.33    d) 833%    e) NOTA

6) The amount of time needed to run the Boston marathon is an example of which type of variable?
   a) Continuous    b) Discrete    c) Qualitative    d) Response    e) NOTA

7) The average resident of Metro City produces 610 lbs. of solid waste each year, and the standard deviation is approximately 85 lbs. Find the weight range that contains at least 75% of all residents’ annual garbage weights.
   a) 525 to 695    b) 440 to 780    c) 270 to 950    d) 355 to 865    e) NOTA

8) In order to have the standard error of the mean be 11, how many samples would be needed from a normally distributed population with a standard deviation of 33?
   a) 27    b) 81    c) 9    d) 3    e) NOTA

9) A single card is drawn from a standard deck of playing cards. Find the probability of selecting a heart or a nine.
10) According to popular belief, 80% of adults enjoy drinking beer. Choose a group of 3 adults at random. The probability that all of them enjoy drinking beer is:
   a) .400  b) .512  c) .333  d) .267  e) NOTA

11) The rankings of golfers in a tournament is an example of what level of measurement?
   a) Nominal  b) Ordinal  c) Interval  d) Ratio  e) NOTA

12) The average height of flowering cherry trees in a certain nursery is 10.5 feet. If the heights are normally distributed with a standard deviation of 1.5 feet, find the probability that a tree is less than 12.5 feet tall.
   a) .96  b) .82  c) .91  d) .73  e) NOTA

13) In order to be accepted into a certain top university, applicants must score within the top 5% of the SAT exam. Suppose that the exam has a mean of 1000 and a standard deviation of 200, what is the lowest possible score a student needs to qualify for acceptance into the university?
   a) 1100  b) 1400  c) 1330  d) 1250  e) NOTA

14) A student takes a sixteen question multiple choice exam with three choices for each question. Find the probability of guessing exactly 9 out of 16 correctly.
   a) .162  b) .034  c) .133  d) .066  e) NOTA

15) A business has seven locations to choose from and wishes to only rank the top three. How many different ways can this be done?
   a) 420  b) 840  c) 5040  d) 210  e) NOTA

16) An insurance company issues a policy for a diamond ring worth $17500 for an annual premium of $262.50. If the probability that the ring will be lost or damaged is .005, what is the company’s expected profit?
   a) $170  b) $175  c) $87.50  d) $82.50  e) NOTA

17) If a menu has a choice of 3 appetizers, 5 entrees, and 4 desserts, how many dinners are possible if only one of each type is to be chosen?
a) 23
b) 27
c) 3
d) 60
e) NOTA

18) The probability of committing a type I error is represented by which of the following?
   a) Phi  b) Beta  c) Theta  d) Alpha  e) NOTA

19) How many ways can a person select 8 DVDs from 10 distinct DVDs?
   a) 8  b) 45  c) 80  d) 90  e) NOTA

20) If a fair quarter is flipped 1000 times, what is the probability of getting “tails” on the 524th flip?
   a) .01  b) .94  c) .50  d) .06  e) NOTA

21) The power of a statistical test is found by using which of the following?
   a) 1 – Phi  b) 1 – Beta  c) 1 – Theta  d) 1 - Alpha  e) NOTA

22) If the null hypothesis is not rejected when it is false, what has occurred?
   a) Correct decision  b) Type I error  c) Type II error  d) Type III error  e) NOTA

23) At a particular school with 200 male students, 58 play football, 40 play basketball, and 8 play both. What is the probability that a randomly selected male student plays neither sport?
   a) 0.58  b) 0.55  c) 0.40  d) 0.96  e) NOTA

24) At a certain university, the average cost of books was $390 per student last semester and the population standard deviation was $90. This semester a sample of 45 students revealed an average cost of books to be $425 per student. The Dean believes that the cost is greater this semester. What is the test value for this hypothesis?
   a) .39  b) .78  c) 2.61  d) 3.50  e) NOTA

25) A report states that 42% of home owners have a vegetable garden. How large a sample is needed to estimate the true proportion of home owners who have vegetable gardens to within 5 percent at a 98% confidence level?
   a) 156  b) 265  c) 410  d) 529  e) NOTA
26) A study of 50 professors showed that the average time they spent creating test questions was 17.5 minutes per question. The standard deviation of the population is 3.8. Which of the following is a 95% confidence interval for the average number of minutes it takes to create a test question?
   a) 16.6 to 18.4   b) 15.4 to 19.6   c) 16.4 to 18.6   d) 17.0 to 18.0   e) NOTA

27) A contingency table is made up of 8 rows and 4 columns. How many degrees of freedom are present?
   a) 32   b) 28   c) 24   d) 21   e) NOTA

28) If the correlation coefficient is .790, what is the explained variation?
   a) 37.6%   b) 62.4%   c) 79%   d) 21%   e) NOTA

29) If the correlation coefficient is .930, what is the unexplained variation?
   a) 7%   b) 93%   c) 13.5%   d) 86.5%   e) NOTA

30) The Celsius temperature scale is an example of what level of measurement?
   a) Nominal   b) Ordinal   c) Interval   d) Ratio   e) NOTA