MOD8-HON211G-Statistics for Midwives

1. The scientific method for statistics uses the null hypothesis to make predictions, not the alternative hypothesis.
    a. true
    b. false

2. The scientific method of statistics:
    a. includes four main steps
    b. places importance of predictive powers of hypothesis or theories
    c. places importance on repeatability
    d. all of the above

3. The four main steps of the scientific method are most accurately described and listed in this order.
    a. develop null hypothesis, ask a question, test hypothesis, make predicaments
    b. ask question, formulate hypothesis, make predictions, test hypothesis
    c. develop active hypothesis, ask question, make predictions, test hypothesis
    d. generate research questions, make predictions, formulate null hypothesis, test hypothesis

4. Research questions should be----
    a. in question form
    b. testable
    c. able to show that the student understands how to take into account the control and experimental group
    d. all of the above

5. The two main types of studies in medical research are:
    a. variable and discreet
    b. active and passive
    c. observational and experimental
    d. hypothetical and experimental

6. Which best defines hypothesis?
    a. any factor that might change during the course of the study
    b. an educated guess about the relationship between variables
    c. a variable that produces a range of values
    d. a made up statistic

7. Any factor that might change the result of a test or experiment is called a:
    a. null hypothesis
    b. active hypothesis
    c. variable
    d. fraction

8. A variable, which produces a range of values is called:
    a. a discrete variable
    b. a continuous variable
    c. a cyclic variable
    d. none of the above

9. With a null hypothesis, the prediction is not based on what you think is going to happen.
    a. True
    b. false

10. Which of these is not an example of a null hypothesis:
    a. Family history will have no effect on the rate of PIH
    b. Race will have no effect on the rate of poverty
    c. Religion will have a direct impact on the rate of STDs
    d. None of the above

11. Clinical trials are:
    a. trials of treatments on human subjects
    b. experimental tests subjected to extensive review
    c. neither a or b
    d. both a and b

12. This method of dividing subjects into groups is random, and any difference between the groups is by chance.
    a. clinical trials
    b. random allocation
    c. volunteer division
    d. longitudinal division

13. To observe and describe an existing condition, and try to understand what is happening, this is often referred to as:
    a. random studies
    b. longitudinal studies
    c. observational studies
    d. cohort studies

14. The Cohort study:
    a. looks backwards in time so the subjects have already completed what we are studying
    b. involves subjects who presently have a certain condition and receive a particular treatment are followed over time and compared with another group who are not affected by the condition under investigation
    c. is the “Gold Standard” in medical research
    d. causes researchers to need a specific sample size

15. The Placebo effect is the same as a response bias.
    a. true
    b. false

16. With a study where the characteristics of the people who volunteer may be different and could bias the outcome, which theory most accurately defines the situation?
    a. volunteer bias
    b. response bias
    c. placebo effect
    d. a and b only

17. In a _____, everyone is counted, the entire population.
    a. random allocation
    b. sample allocation
    c. census
    d. treatment plan

18. Prevalence is the proportion of people known to have a condition at any given time, often reported as a ratio: # of existing cases/ population at risk.
    a. true
    b. false

19. The number of new cases in populations during a given time period is referred to as:
    a. prevalence
    b. relevance
    c. incidence
    d. sampling

20. The manner in which the examiner asks the questions can directly influence the reply received. This is called:

a. leading questioning
b. quantitative questioning
c. questionnaire bias
d. study bias

21. This type of data can be more than words or texts. Photos, videos and sound equipment have been collected for this type of data.
    a. Quantitative data
    b. Qualitative data
    c. Continuous data
    d. Statistical data

22. Accurately describe Quantitative Data:
    a. It is not in numerical form
    b. It can be in a numerical range
    c. values or measurements that are integers or whole numbers, there are no fractions
    d. both b and c

23. The number of children a woman has is not quantitative data.
    a. true
    b. false

24. When we calculate values based on data points, any value calculated from the data is a _____.
    a. statistic
    b. mode
    c. means
    d. medium

25. The _____ of a statistical distribution with a discrete random variable is the mathematical average of all terms.
    a. mode
    b. mean
    c. average
    d. both b and c

26. A single observation far away from the rest of the data is called:
    a. out of range
    b. zero distribution
    c. outlier
    d. zero contribution

27. Name two measurements of central tendency.
    a. distribution, variance
    b. mean and median
    c. deviation and variance
    d. mode and velocity

28. A normal distribution is also called a Gaussian distribution.
    a. true
    b. false

29. Numerically, this measurement equals the highest score minus the lowest score.
    a. mean
    b. median
    c. range
    d. variance

30. The easiest way to get an accurate statistic based on a sample are:
    a. to use a large sample size
    b. to make sure the sample is randomly selected
    c. to use a small sample size
    d. a and b only

31. A small sample size is highly likely to give a statistic that accurately reflects the population.
    a. true
    b. false

32. What does the following p-value indicate about the strength of the evidence? Between 0.05 and 0.1:
    a. little to no evidence of a difference between groups or a relationship between variables
    b. weak evidence of the above
    c. strong evidence of the above
    d. none of the above