Name:_____ **Class:**_____ **Date:**_____ **ID: A**

Research Methods, Test 2

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

1. Professor Smith gave an exam on Monday. On Wednesday Smith gave the same class the same exam. Professor Smith was assessing the exams
   a. reliability
   b. validity
   c. face validity
   d. conceptualization
   e. all of the above

2. Reliability involves
   a. whether a particular technique applied repeatedly to the same object would yield the same results each time
   b. ensuring accuracy
   c. ensuring that your measure measures what you think it should measure
   d. ensuring precision
   e. all of the above

3. Most social scientists would not accept the conceptualization of IQ as foot size because such a measurement lacks
   a. precision
   b. reliability
   c. accuracy
   d. validity
   e. all of the above

4. Because low marital adjustment should lead to divorce, Professor Rogers checked his measure of marital adjustment by examining whether couples with low marital adjustment scores were more likely than couple_ with high marital adjustment scores to later obtain a divorce. This illustrates the use of
   a. criterion-related validity
   b. face validity
   c. content validity
   d. construct validity
   e. test-retest validity

5. Which of the following is a nominal variable
   a. Education
   b. Religion
   c. Age
   d. Occupational prestige
   e. Not enough information to know

6. Professor Shipley developed a NEW test to measure IQ. He claimed that using his test, someone with an IQ of 180 would be considered twice as intelligent as someone with an IQ of 90 and that someone with an IQ of 90 was three times as intelligent as someone with an IQ of 30. Shipley's test treats IQ as a(n)
   a. nominal variable
   b. interval variable
   c. ratio variable
   d. ordinal variable
   e. none of the above

7. Professor Tyler wrote a proposal to study the impact of authoritarianism on child rearing practices. She began her research by reviewing the meaning of *authoritarianism* in the sociological and psychological literature. Based on this review, she formulated her own definition of *authoritarianism.* This process illustrates
   a. Operationalization
   b. The interchangeability of indicators
   c. Conceptualization
   d. Validity assessment
   e. Reliability assessment

8. Professor Tyler believes that her measure of authoritarianism is valid after finding that it varies, as predicted by theory, with child rearing practices and voting behavior. Tyler is relying on a _____ approach to validity.
   a. Face validity
   b. Content validity
   c. Predictive validity
   d. Criterion-related validity
   e. Construct validity

9. Professor Tilton measured the variable "feelings toward drafting women" with the categories strongly agree, agree, indifferent, disagree, and strongly disagree. Professor Tilton was using the level of measurement.
   a. nominal
   b. interval
   c. ratio
   d. ordinal
   e. not enough information to decide

10. Which of the following do indexes and scales have in common?
    a. They are interval measures.
    b. Their attributes form an intensity structure.
    c. They rank-order the units of analysis
    d. Both a and b
    e. They are nominal measures.

11. Professor Duncan administered a questionnaire containing the following items:
Please tell me how you feel about your supervisor's leadership style on the following three items:

valuable	---:---:---:---:---	worthless
easy	---:---:---:---:---	demanding
critical	---:---:---:---:---	uncritical

Duncan was using a
a. Semantic differential scale
b. Thurstone scale
c. Bogardus social distance scale
d. Guttman scale
e. Likert scale

12. Professor Thames used a Guttman scale on his data set that he had seen published in a major journal. Thames was upset because the items did not scale on his data. Confused, he asked for your help. You should tell him
a. the article that appeared in the journal was probably in error
b. he should recheck his scaling techniques because he probably made an error
c. items may form a Guttman scale in one sample but not in another
d. it was probably not a very good scale
e. none of the above

13. The following items measure the extent to which Americans are willing to associate with extraterrestrials.
1. It's OK if my child marries an extraterrestrial.
2. It's OK to have an extraterrestrial for a friend.
3. It's OK to have an extraterrestrial living on the block.
4. It's OK to have an extraterrestrial living in my community.

These items illustrate a
a. Guttman scale
b. Bogardus social distance scale
c. Thurstone scale
d. Likert scale
e. none of the above

14. Giving a set of judges a large number of items that are thought to be indicators of a given variable and asking them to estimate how strong an indicator of the variable each item is, is a technique used in constructing a _____ scale.
a. Bogardus
b. Guttman
c. Thurstone
d. Semantic differential
e. Likert

15. In general, as sample size increases
    a. the standard error increases in size
    b. the standard error decreases in size
    c. the standard error will remain the same regardless of changes in sample size
    d. the standard error is a constant
    e. the standard error fluctuates in size

16. Nonprobability sampling
    a. always produces samples that possess distorted characteristics relative to the population
    b. denies the researcher the use of statistical theory to estimate the probability of correct inferences
    c. should never be used under any circumstances
    d. includes stratified sampling ..
    e. requires the use of sampling frames

17. Probability samples are advantageous to the researcher because
    a. the method by which they are selected limits conscious and unconscious sampling bias
    b. the accuracy or representativeness of the sample can be estimated
    c. they are perfectly representative of the population from which they are drawn
    d. all of the above
    e. only a and b are correct

18. A sampling interval of 5 was used to select a sample from a population of 1000. How many elements are to be in the sample?
    a. 5
    b. 50
    c. 100
    d. 200
    e. 1000

Research Scenario

You are doing research on hospital personnel--orderlies, technicians, nurses, and doctors. You want to be sure you draw a sample that has cases in each of the personnel categories.

19. Refer to Research Scenario. You want to use probability sampling. An appropriate strategy would be
    a. simple random sampling
    b. convenience sampling
    c. cluster sampling
    d. stratified sampling
    e. snowball sampling

20. You want to examine the relationship between family size and family cohesion. You use as your sample all the students in your research methods class. What kind of sampling design are you using?
    a. simple random sampling
    b. quota sampling
    c. cluster sampling
    d. stratified sampling
    e. convenience sampling

21. A summary description of a variable in a sample is called a
    a. variable
    b. cluster
    c. confidence level
    d. confidence interval
    e. statistic

22. Every *k*th element in a list is chosen for inclusion in the sample in a simple random sampling
    a. simple random sampling
    b. systematic sampling
    c. disproportionate sampling
    d. cluster sampling
    e. stratified sampling

23. If a field researcher wanted to learn a political organization's pattern of recruitment over time, the research might begin by interviewing a fairly recent recruit and ask who introduced that person to the organization Then the researcher might interview the person named and ask who introduced that person to the political organization. This would be an example of
    a. snowball sampling
    b. systematic sampling
    c. deviant cases sampling
    d. accidental sampling
    e. quota sampling

24. In multi-stage sampling:
    a. sampling error is reduced
    b. sampling error is increased
    c. sampling error is not effected
    d. sampling error is eliminated
    e. none of the above

25. Professor Hall was planning to do a field study of hitchhikers. Hall wanted to be sure that persons representing all different age, racial, and sex categories were included in the sample of hitchhikers. What kind of sampling scheme would you recommend?
    a. deviant cases
    b. quota sampling
    c. stratified sampling
    d. snowball sampling
    e. cluster sampling

Life Satisfaction

The following table shows patterns for a Guttman scale on life satisfaction. (Note: a + = "Yes" and a - = "No")

VARIABLES

	HEALTH	HOBBIES	CITY	# OF CASES
A	+	+	+	100
B	+	+	-	75
C	+	-	-	50
D	-	-	-	25

26. Refer to Life Satisfaction. Given the patterns for a Guttman scale on life satisfaction, the coefficient of reproducibility is:
a. 1.00
b. .95
c. .90
d. .85
e. cannot compute from the information given

True/False
Indicate whether the sentence or statement is true or false.

__F__27. If two items in an index are perfectly correlated, both of them should be eliminated from the index.

__F__28. Always include at least one item in an index on which all respondents give the same answer.

__T__29. Scales take into consideration the intensity with which different items reflect the variable being measured.

__F__30. It is impossible to have several indicators of only one concept.

Answer Both of the following:

(10 points)
1. Describe the tension between reliability and validity. Be sure to define and give an example of each as part of your explanation.

(15 points)
2. According to probability theory, we can determine a confidence interval around a sample statistic that will give us a range of error when comparing the sample statistic to the population statistic. We can also determine how much confidence we have in our range of error.

Explain this in more detail. What is a confidence interval and how does it relate to probability theory? How would it be calculated if you were using a dichotomous variable? Use an example to help explain your answer.

What do we mean by confidence level and how does it relate to probability theory? How can we be at least 95 % confident that our confidence interval is correct. Again, use an example to help explain.