Qualitative Research (10 pts.)

1. Of the following, qualitative research is best suited for:
   a) generalizing findings to other settings
   b) describing participants and contexts
   c) making inferences from samples to the population
   d) using statistics to interpret the data

2. In which of the following settings would a qualitative study least likely be conducted?
   a) classroom  b) playground  c) psychology lab  d) school

3. Bryce is planning a qualitative study to examine before-school child care programs. Which of the following strategies is the most desired data source for Bryce?
   a) standardized test scores of students enrolled and not enrolled in before-school programs
   b) interview data collected at the enrolled students' homes
   c) observations of children during the before-school program
   d) classroom behavior ratings of the enrolled children by the classroom teacher

4. In a qualitative study, hypotheses are usually:
   a) stated in a testable form prior to the study
   b) based on a comprehensive review of the literature
   c) limited and informal, if they are even stated at all
   d) confirmed or disconfirmed based on the data

5. Non-random sampling is often used in qualitative studies. "Purposive" sampling is one type of non-random sampling. Which of the following best reflects the results of purposive sampling?
   a) 5 principals identified as being “outstanding”
   b) 50 randomly selected first graders
   c) a systematic sample of 39 first graders who checked out a book in a given week
   d) a random sample of 15 schools who implemented a new math curriculum last year

6. Cross-checking data obtained in different ways and/or from different sources is referred to as:
   a) documentation
b) norming  
c) synthesis 
d) triangulation

7. Fieldwork typically involves any of the following data collection strategies except:
   a) collection of documents 
b) participant observation 
c) posttest administration 
d) unstructured interviews

8. Marty is studying teacher innovation with technology. He is really surprised to find that whenever he comes for his scheduled observations, the teachers he is studying all use extensive amounts of computer-based technology in their classrooms. Marty may be experiencing:
   a) the halo effect 
b) observer bias 
c) observer effect 
d) déjà vu

9. Jody needs to conduct a study for her research methods course. She is interested in studying home schooling. She thinks that students who are home-schooled don't develop appropriate social skills. As a part of her study, she will be observing home-schooled children in social settings. Jody must be particularly cautious in her study not to introduce:
   a) response bias 
b) observer bias 
c) observer effect 
d) negative case effect

10. Nancy is interviewing graduate students regarding their opinion of a graduate student union on campus. She uses a predetermined protocol, takes notes, and also audiotapes the sessions. After each session, Nancy types the audiotapes, verbatim, into a computer file. Nancy is best illustrating:
    a) memoing  b) transcribing  c) interpreting  d) categorizing

General Review Questions (40 pts.)

(Questions 11 - 16) Match the title of research report with the type of research most likely used. Use the following response choices:
   a) descriptive  b) correlational  c) causal-comparative  d) experimental  e) qualitative

11. The Prediction of Success in Physics Based on a Physics Aptitude Test
12. The Reading Achievement of Male versus Female Middle School Students.
13. Attitudes of South Carolina Public School Teachers Toward Unions.
14. Exploring the Emotions of a Middle School Reader
15. The Effects of Dosage of Ritalin on the Behavior of Attention Deficit Disordered Children.
16. The Effects of Computer Simulation Activity versus Hands-on Activity on Product Creativity in Technology Education

(Questions 17 – 21) Match the description with the appropriate sampling procedure. Use the following response choices:

a) cluster  b) random  c) stratified random  d) systematic  e) non-random

17. A sample of elementary schools is randomly selected from all public elementary schools in South Carolina. The pupils in each selected building are then included in the study.

18. All school districts in South Carolina are first divided into “large,” “medium,” and “small” classifications. Within each classification or group of districts, an equal number of superintendents is randomly selected for inclusion in a survey.

19. All high school English teachers in South Carolina public schools systems are listed and numbered consecutively. A table of random numbers is then used to select 150 teachers for inclusion in a study.

20. Julie uses all of the students in her 1st and 2nd block Spanish classes for her study.

21. Allan obtains a list of 500 third graders in the district. Starting at the top of the list, he selects every 10th student for inclusion in his study.

(Questions 22 – 26) For each statement, identify the threat to validity it most likely represents. Use the following response choices:

a) reactive arrangements  b) mortality  c) regression  d) instrumentation  e) selection

22. A study is conducted in which only students who score very low on reading tests are used as subjects.

23. The control group felt cheated because they didn’t get to play simulation games like the experimental group.

24. The equivalent forms reliability for the pretest and posttest was r=.30.

25. Notswift Middle School evaluated its ninth-grade program for gifted and talented students by comparing participants’ creativity scores with the scores for the rest of the ninth grade.
26. Thirty percent of the teachers in the ten-week Methods of Discipline workshop series stopped participating after two weeks because too much time was required.

(Questions 27 – 32) For each statement, identify the section of a research report or proposal from which it came. Use the following response choices:

a) statement of the problem
b) review of related literature
c) statement of the hypothesis
d) subjects
e) instrumentation
f) design

g) procedures
h) data analysis

27. It is the purpose of this study to examine the relationship between the direct teaching of mathematics and achievement in math.

28. ... students who receive special instruction in selected mathematics skills will demonstrate significantly greater mathematics achievement ....

29. Participants for this study will be selected from 8th grade students enrolled at Wando High School.

30. Subjects in both groups will receive a pretest and a posttest. They will also be randomly assigned to treatment groups.

31. The “control group” will receive their typical mathematics instruction from the math series adopted by the school system.

32. „….. Johnson and Smith (2003) found that 95% of teachers involved in their study reported a lack of satisfaction with administrative support. Additional research (e.g., Smith, Jenkins, & Kline, 2002; Green & Hill, 2001) supports these findings. .....”

(Questions 33 – 38) Match each type of validity with its matching description. Use the following response choices: a) content  b) construct  c) concurrent  d) predictive

33. __________ validity is concerned with whether a measure adequately samples an intended area (e.g., curriculum).

34. __________ validity is typically based on the correlation between test scores and some measure of success taken at a later date.

35. __________ validity is concerned with whether a test adequately measures an intended hypothetical trait.

36. __________ validity correlates scores on a new test with scores obtained on an already established test.
37. ___________ validity is “logical” validity. That is, it is typically determined by expert judgment.

38. The XYZ Test of Elementary Spelling is very highly correlated with scores on the Mann Elementary Test of Spelling. The high correlation between scores on these two tests is an example of ______________ validity.

39. An experiment is designed to compare the effects of Methods A, B, and C of teaching science on the mastery of science concepts of high school students. What is the dependent variable in this study?
   a) science    c) mastery of science concepts
   b) teaching method  d) high school students

40. The major distinguishing characteristic of a true experimental design in education is:
   a) manipulation of independent variables through the random assignment of subjects to groups
   b) valid measures of both independent and dependent variables
   c) a strong relationship between independent and dependent variables
   d) drawing a random sample from a population which is clearly defined

41. The basic difference between causal-comparative research and experimental research is that in causal-comparative studies:
   a) there are fewer sources of internal validity
   b) the selection of the dependent variable has been predetermined
   c) there usually is no independent variable
   d) the independent variable has already been manipulated by factors outside of the researcher’s control

42. An “extraneous” or “confounding” variable is a variable:
   a) that has a high likelihood of having an effect on the independent variable
   b) that the researcher hopes will be present in the study
   c) besides the independent variable which can affect the results

43. When the results of an experiment are true only under specific conditions and do not generalize beyond these particular experimental conditions, the experiment is said to have:
   a) low internal validity       c) high internal validity
   b) low external validity      d) high external validity

44. The best single way to control for extraneous variables is:
   a) matching                      c) analysis of covariance
   b) comparing homogeneous groups   d) randomization
45. Diagram the pretest-posttest control group design.

46. List one threat to the validity of the design you diagrammed in the previous question.

47. Mary wants to evaluate the effects of her course on inclusion on the attitudes toward inclusion of elementary teachers. She administers her attitudinal scale on the first day of class – before the course begins. She administers the scale again after the completion of the 13-week course. Which of the following are potential threats to validity in this study.
   a) history      b) maturation    c) regression   d) all of these  e) “a” and “c” only

48. Name and/or diagram the design illustrated by the example in Question #47.

49. The “treatment” in an experimental study is another name for:
   a) independent variable
   b) dependent variable
   c) extraneous variable
   d) mediating variable

50. James is investigating the effects being raised in a bi-lingual home (verses monolingual) on the language development of children in middle school. The dependent variable in this causal comparative study is:
   a) type of home
   b) language development
   c) bilingualism
   d) type of school

Critique of Research Report (20 points)

Based on the research report titled: “The Effects of Computer-Assisted Instruction on First-Grade Students’ Vocabulary Development,” given to you before the examination, respond to the five questions below. Be sure to respond, in detail, to all portions of the questions. Please use the bluebook provided.

1. What is the problem being investigated in this study? That is, what is the purpose. Is the problem statement well written? Is it in the proper location in the research report? Justify your response.

2. What type(s) of research is(are) represented by this study (i.e., qualitative, descriptive, correlational, causal-comparative, or experimental)? Justify your response.
3. Describe and label the sampling procedure. For this type of research, is this procedure appropriate? To what groups can the results from this study be generalized? Justify your responses to both questions.

4. Describe the instrument(s) used to measure the dependent variable(s) in the study. Were they described in detail? Did the authors provide information pertaining to the reliability and validity of the instruments? If so, describe and (next page) critically evaluate the information provided. If not, discuss how this lack of information weakens the study.

5. Identify the design used in the study. Were any procedures included to control for potentially confounding variables? If so, describe them. If not, discuss the implications for the study. List and describe potential threats to internal and external validity?