Note:

- The day and time of the final will be from 9:50-11:50am on January 12 in room EX 113. The exam time can be extended to 1pm.
- Mock exam is meant to help you prepare for the final. Five multiple choice questions on the final will be based on the materials of this mock exam.
- The concepts covered in mock exam may also appear in the final, but you should not misunderstand that only materials covered here will be included in the final.
- Recall that the final is cumulative, and no more than one third of the final exam questions will cover the materials taught before the midterm.

Part I. Multiple Choice (單選複選)

Multiple Choice (單選)

1. When a researcher is selecting items for a composite index, which of the following should be kept in mind?
   - a. Each item should have face validity.
   - b. A composite measure should be unidimensional.
   - c. There should be concern about the amount of variance provided by the items.
   - d. All of the above are correct.

2. 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 fluctuates in size
3. Stratifying a population prior to drawing a sample
   a. eliminates the need for simple random sampling
   b. is most useful for studying a homogeneous population
   c. is an alternative to either random or systematic sampling
   d. none of the above

4. The chief purpose of probability sampling is to be able to select
   a. a sample whose statistics will accurately portray an unknown population parameter
   b. a sample whose parameters will accurately portray an unknown population statistic
   c. a sample whose statistics will accurately portray a known population parameter
   d. a sample whose unknown statistics will accurately portray a known parameter

5. Drawing a judgmental sample
   a. enlists the aid of uninformed respondents
   b. results in a sample that has no researcher bias
   c. requires the development of a quota matrix
   d. allows researchers to use their prior knowledge about the topic

6. A researcher discovers that in a particular city 10% of the households are headed by a single person and that 90% of the families are husband-wife families. The researcher tells interviewers to conduct 80 interviews. Ten percent of these interviews should be with families that are headed by a single person, and 90% should be with husband-wife families. This research uses
   a. simple random sampling
   b. quota sampling
   c. cluster sampling
   d. stratified sampling

7. The unit about which information is collected and that provides the basis of analysis is called a(n)
   a. sampling unit
   b. unit of analysis
   c. sampling frame
   d. element
8. Professor Chen mailed a questionnaire to students on the issue of academic dishonesty. Chen planned to use inferential statistics in the analyses and was concerned about the response rate. You tell Chen that technically the use of inferential statistics assumes that
   a. all members of the population complete and return the questionnaire
   b. all members of the initial sample complete and return the questionnaire
   c. at least 50% of the members of the initial sample complete and return the questionnaire
   d. the overall response rate exceeds 75%

9. Which of the following lists the three main methods of administering survey questionnaires to a sample of respondents?
   a. Self-administered questionnaires, telephone interviews, and mail surveys
   b. Face-to-face interviews, CATI surveys, and telephone surveys
   c. Face-to-face interviews, telephone interviews, and electronic surveys
   d. Face-to-face interviews, self-administered questionnaires, and telephone surveys

10. A key problem of secondary analysis is
    a. cost
    b. validity
    c. sample selection
    d. data collection strategies

11. Bias in a questionnaire item
    a. encourages respondents to answer questions in a particular way
    b. helps reveal the respondents' true feelings about a topic
    c. is usually obvious to both the respondents and the researcher
    d. occurs only when questions are negatively worded

12. A measure of dispersion describes
    a. where the data are clustered
    b. which data are the most important
    c. how spread out the data are
    d. which data are appropriate for analysis
13. The formulas for some measures of association can result in coefficients with either positive or negative signs. Under which of the following circumstances can those signs be meaningfully interpreted?
   a. when the data are measured at the nominal level
   b. when the data are measured at the ordinal level
   c. whenever the data have a modal category
   d. whenever the data are expressed as percentages

14. An appropriate measure of association for determining the strength of the relationship between religious affiliation (Protestant, Catholic, Buddhist, Other) and sex (male, female) is
   a. gamma
   b. lambda
   c. chi square
   d. Pearson's product moment correlation

15. A .05 level of significance means that
   a. there is only a 5% chance that the statistic's value could be obtained as a result of sampling error only
   b. one is 50% certain that the sample value is representative of the population
   c. there is only a 5% chance that the variables tested are not independent
   d. the results can be accepted because the sampling error is only 5%

Multiple Choice (複選)
16. Which of the following do indexes and scales have in common?
   a. Their scores represent a pattern of response.
   b. Their attributes form an intensity structure.
   c. They rank-order the units of analysis in terms of specific variables.
   d. They are ordinal measures.
17. Among the reasons for the frequent use of composite measures is(are) that
   a. the researcher is seldom able to develop in advance single indicators of complex concepts
   b. a single data item might not have enough categories to provide a range of variation
   c. composite measures give a more comprehensive and accurate indication of a given variable
   d. they are efficient data reduction devices

18. Using Likert-type scale items, Professor Wang developed an index to assess job morale. Wang administered the index to 2,000 workers and found that 1-4 responses were missing on each of the items. Wang could
   a. exclude the cases that contained the missing data from the analysis
   b. assign the middle value to cases with missing data
   c. analyze the cases that had missing data to interpret their meaning
   d. assign values at random

19. Probability samples are advantageous to the researcher because
   a. no prior knowledge about the population is needed since samples are drawn randomly
   b. the method by which they are selected limits conscious and unconscious sampling bias
   c. they are perfectly representative of the population from which they are drawn
   d. the accuracy or representativeness of the sample can be estimated

20. Disproportionate sampling and weighting are used by the researcher
   a. to ensure a sufficient number of cases in each of the sample subpopulations
   b. to give a disproportionate representation to each sample element
   c. to provide a representative picture of the total population
   d. to handle situations involving the errors and approximation that are often inherent in complex, multistage designs
21. Contingency questions are used to
   a. increase the overall number of questions could be asked in a survey
   b. spare respondents the frustration of reading and puzzling over questions that are irrelevant to them
   c. increase the likelihood of responses from those for whom the questions are relevant
   d. enable the researcher to ask several questions that have the same set of answer categories

22. Certain guidelines should be kept in mind when coding. Among these is(are) the following:
   a. Use one coder to increase the efficiency of coding
   b. The coding scheme should be appropriate to the theoretical concepts being examined.
   c. The reliability of the coder(s) should always be verified.
   d. The coding scheme should be appropriate to the analysis intended in the study.

23. Which of the following is(are) an assumption(s) underlying the use of inferential statistics?
   a. sample must be drawn from the population about which inferences are to be made
   b. simple random sampling
   c. 100% completion rate
   d. sampling with replacement

24. Professor Lin calculated a chi square of 83.26 on a set of data. The value for chi square in the table at the .05 level was 16.91. Lin concluded that
   a. it is improbable that the observed relationship could have resulted from sampling error alone
   b. the null hypothesis was rejected
   c. there is a statistically significant relationship at the .05 level
   d. the probability of obtaining the observed relationship is equal to or smaller than 0.05
25. The regression model can be used to
   a. summarize a relationship between variables
   b. predict a value of one variable from its relationship to another related variable
   c. analyze a relationship between two nominal variables
   d. determine the specific function relating the two variables

26. Which of the following is an assumption underlying regression analysis?
   a. simple random sampling
   b. discrete variables
   c. at least interval data
   d. absence of nonsampling error

27. The formula \( Y = f(X) \) tells us that
   a. \( f \) is the independent variable
   b. \( Y \) is the dependent variable
   c. \( X \) is the independent variable
   d. Need to know what \( Y \), \( f \), and \( X \) represent to determine the dependent variable

28. Which of the following is an advantage of interviews as compared to self-administered questionnaires?
   a. Interviews handle sensitive issues more effectively
   b. Interviews produce fewer incomplete questions
   c. Interviews have higher response rates
   d. Interviews are more effective in dealing with complicated issues

29. Which of the following statistics can be calculated on continuous data?
   a. mean
   b. median
   c. standard deviation
   d. Pearson’s correlation

30. A codebook
   a. Describes the locations of variables
   b. Lists the codes assigned to the attributes on each variable
   c. Records the completion rate of a survey
   d. Should contain the full definition of the variable
Part II. For Your Information: List of Quiz Questions after the Midterm Exam

Multiple Choice (單或複選)

1. Probability theory specifies that
   a. 68% of the samples will fall within about plus or minus one standard error of the population parameter
   b. 34% of the samples will fall within one standard error increment below the population parameter
   c. 5% of the samples will fall within about plus or minus two standard error of the population parameter.
   d. 99% of the samples will fall within about plus or minus three standard error of the population parameter

2. A disadvantage of stratified sampling is that it
   a. denies you the use of probability theory
   b. requires you to have some prior knowledge about the elements in the population prior to drawing the sample
   c. usually increases the standard error
   d. usually requires samples that are larger in size than those required by simple random sampling

3. Which of the following statements is(are) incorrect?
   a. Close-ended questions should limit respondents to three or four choices.
   b. Closed-ended questions should have response categories that are mutually exclusive and exhaustive.
   c. Closed-ended questions should provide uniformity of responses.
   d. Closed-ended questions should cover the range of likely responses.
   e. Closed-ended questions are appropriate when relevant answers to questions are relatively clear.

   [Answers: 1. abd  2. b  3. a ]

Short Essay Questions:
1. 用一句話簡短說明指標與量表的相異之處。
2. 何謂 “信賴區間” (confidence interval)? 何謂 “信賴水準” (confidence level)?
### Part I. Answers

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