Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
Isulan Camus, Isulan Sultan Kudarat
College of Computer Studies
Bachelor of Science in Information System

IS 412 – Capstone Project 2
Midterm Exam

Name: _____ Course/Yr/Section_____ Score: _____

Instructions:

- Read each question carefully and encircle the letter of the correct answer.
- You have 2 hours to complete the exam.

1. What is the primary purpose of data analysis?
   a. To modify data to fit desired results
   b. To extract meaningful insights from collected data
   c. To replace data with assumptions
   d. To increase the complexity of data representation
2. What is a key characteristic of descriptive analysis?
   a. It predicts future trends
   b. It summarizes and visualizes data trends
   c. It manipulates data values
   d. It removes incomplete data
3. Which statistical method is commonly used to establish relationships between variables?
   a. Descriptive statistics
   b. Regression analysis
   c. Frequency distribution
   d. Data visualization
4. Inferential statistics help researchers to:
   a. Summarize collected data
   b. Make predictions based on sample data
   c. Create non-representative samples
   d. Ignore variability in datasets
5. Which of the following improves data accuracy?
   a. Using outdated statistical methods
   b. Ensuring proper data validation and cleaning
   c. Removing all negative findings
   d. Ignoring outliers in a dataset
6. Data visualization is most effective for:
   a. Identifying patterns and trends
   b. Eliminating unwanted results
   c. Complicating data interpretation
   d. Restricting access to data insights
7. In data analysis, the term "outlier" refers to:
   a. A missing data entry
   b. A value significantly different from others
   c. The final conclusion in a study
   d. A randomly selected data point
8. Which tool is commonly used for statistical analysis?
   a. Microsoft Word
   b. SPSS
   c. Photoshop
   d. Excel
9. What does a high correlation between two variables indicate?
   a. A random relationship
   b. A strong connection between the variables
   c. No relationship at all
   d. An error in data collection
10. When interpreting data, it is important to:
    a. Disregard conflicting data points
    b. Consider bias and possible limitations
    c. Ignore sample size concerns
    d. Select results that match expectations
11. What is the main function of the Results section in a research paper?
    a. To analyze and interpret data findings
    b. To summarize the literature review
    c. To introduce new research questions
    d. To provide recommendations
12. In discussing results, researchers should:
    a. Compare findings with previous studies
    b. Assume results are universally applicable
    c. Ignore unexpected outcomes
    d. Only focus on favorable results

13. A well-written discussion section should:
    a. Interpret findings without exaggeration
    b. Modify conclusions to match expectations
    c. Ignore limitations in the study
    d. Avoid comparisons with previous studies

14. One way to validate results is to:
    a. Conduct a peer review
    b. Alter data for consistency
    c. Ignore opposing viewpoints
    d. Focus only on statistical significance

15. How should conflicting results be addressed in a discussion section?
    a. Omit them from the analysis
    b. Provide reasoning for inconsistencies
    c. Modify the data to remove conflicts
    d. Assume errors occurred in data collection

16. A strong conclusion should:
    a. Repeat all results word for word
    b. Summarize key findings and their implications
    c. Introduce unrelated research topics
    d. Avoid mentioning any challenges

17. Effective recommendations should be:
    a. Actionable and evidence-based
    b. General and vague
    c. Based solely on assumptions
    d. Unrelated to study findings

18. When making recommendations, researchers should:
    a. Provide practical applications for stakeholders
    b. Disregard study limitations
    c. Suggest conclusions without supporting data
    d. Ignore real-world implications

19. What is a crucial step before analyzing collected data?
    a. Discarding all negative results
    b. Cleaning and validating the data to remove inconsistencies
    c. Adjusting data values to match expected findings
    d. Ignoring missing data entries

20. The difference between primary and secondary data is:
    a. Primary data is gathered firsthand, while secondary data is collected from existing sources
    b. Secondary data is more accurate than primary data
    c. Primary data is always numerical, whereas secondary data is only qualitative
    d. There is no difference between them

21. What statistical test is commonly used to determine whether there is a significant difference between two groups?
    a. Correlation analysis
    b. T-test
    c. Frequency distribution
    d. Mean computation

22. A histogram is useful for:
    a. Representing categorical data in a tabular form
    b. Displaying the distribution of numerical data
    c. Listing data sources in research
    d. Formatting research findings

23. The term "bias in data analysis" refers to:
    a. A researcher making conclusions based on subjective opinions rather than data
    b. A tendency to record irrelevant data
    c. The process of normalizing datasets
    d. An unbiased method of collecting and analyzing data

24. What should a researcher do if their results contradict previous studies?
    a. Ignore the discrepancy
    b. Acknowledge the difference and explore possible explanations
    c. Change the results to match existing literature
    d. Remove conflicting data points

25. Which statement is an example of objective result interpretation?
    a. "The results clearly prove the hypothesis beyond any doubt."
    b. "This data supports the hypothesis based on statistical significance."
    c. "The findings are definitely true according to my own judgment."
    d. "This data proves that the researcher was correct."

26. A research discussion must:

a. Expand on results while linking them to the research question
b. Focus only on presenting the raw findings
c. Provide conclusions without referencing any data
d. Discuss unrelated findings to make the study more comprehensive

27. In which case should a researcher consider revising their discussion section?
a. If the findings contradict common assumptions
b. If the interpretation lacks logical connections to data
c. If the study includes multiple variables
d. If results are identical to those found in previous research

28. A strong conclusion must:
a. Introduce new research objectives
b. Summarize key findings and their significance
c. Avoid stating any implications for future research
d. Repeat the results section word for word

29. Why is it important to state the limitations of a study in the conclusion?
a. To highlight weaknesses and invalidate findings
b. To help readers understand factors that could affect results
c. To discourage further research on the topic
d. To prove the research is flawed

30. When making recommendations based on findings, a researcher should:
a. Align them with real-world applications
b. Generalize recommendations for all possible fields
c. Present opinions without supporting evidence
d. Focus only on theoretical implications

31. What is a common issue that can affect data integrity in research?
a. Overly complex statistical models
b. Data entry errors and inconsistencies
c. Using multiple sources of data
d. Conducting secondary research only

32. Which of the following best describes sampling bias ?
a. Selecting a representative sample from a population
b. Using random selection methods to collect data
c. Choosing a sample that does not accurately reflect the population
d. Excluding data points that do not fit expectations

33. 33. What is the purpose of a p-value in statistical analysis?
a. To measure how much data is missing from a dataset
b. To determine the significance of a statistical result
c. To compare different research methodologies
d. To indicate the total number of data points collected

34. Which of the following is an example of qualitative data ?
a. The average test scores of students in a university
b. The number of customers visiting a store each day
c. The opinions of respondents in an interview
d. The sales revenue of a company for the past quarter

35. In a hypothesis testthe null hypothesis states that:
a. There is no significant relationship between variables
b. A direct relationship exists between two variables
c. The researcher must adjust data to fit expectations
d. There are errors in the analysis process

36. A significant resultin a study implies that:
a. The findings are influenced by personal biases
b. The results are meaningful and not due to chance
c. The hypothesis is automatically proven correct
d. The study cannot be questioned

37. 37. How should researchers handle unexpected findings in a study?
a. Discard them because they do not support the hypothesis
b. Interpret them within the context of research limitations
c. Modify them to better fit previous studies
d. Avoid reporting them altogether

38. Which statement is an example of a well-structured discussion section ?
    a. "Our results match previous studies, so they must be correct."
    b. "The results show a correlation, but further research is needed to understand causality."
    c. "We believe our findings are accurate without additional validation."
    d. "All previous research in this area is flawed, and our study corrects it."
39. Why is it important to compare research findings with existing literature ?
    a. To validate new results and highlight their significance
    b. To increase the complexity of the discussion section
    c. To avoid presenting independent analysis
    d. To prove that previous studies were incorrect
40. Which of the following should be included in the discussion section ?
    a. New data collected after the research was completed
    b. Speculative statements without supporting evidence
    c. A critical interpretation of results in relation to objectives
    d. An overview of references used for the study
41. What should a research conclusion focus on?
    a. Presenting new research topics
    b. Summarizing key findings and their broader significance
    c. Restating every detail from the discussion section
    d. Avoiding real-world applications
42. When making recommendations, researchers should:
    a. Provide clear and specific guidelines for future studies
    b. Generalize findings without detailed applications
    c. Base recommendations on unverified assumptions
    d. Limit suggestions only to theoretical implications
43. 43. What is a primary consideration when stating the limitations of a study ?
    a. Identifying factors that could affect research validity
    b. Avoiding discussion about study weaknesses
    c. Modifying results to minimize limitations
    d. Ensuring the study appears flawless
44. Why are evidence-based recommendations important?
    a. They ensure practical applications of research findings
    b. They replace the need for drawing conclusions
    c. They validate all previous studies in a field
    d. They eliminate contradictory research results
45. Which of the following is a weak research conclusion?
    a. "This study contributes valuable insights and suggests further investigation."
    b. "Our research results prove all existing theories are incorrect."
    c. "The findings align with previous research, supporting the validity of the study."
    d. "Based on evidence, recommendations for future research are provided."

46. Which data analysis method helps researchers make predictions based on existing data?
    a. Regression analysis
    b. Frequency distribution
    c. Qualitative coding
    d. Descriptive statistics
47. Why should researchers ensure replicability in their study?
    a. To allow other researchers to verify findings
    b. To prevent others from accessing the results
    c. To modify findings for a better conclusion
    d. To limit further studies in the field
48. How can researchers enhance the credibility of their results?
    a. Use validated methodologies and provide transparency in reporting
    b. Ignore data inconsistencies to strengthen conclusions
    c. Select only favorable results for publication
    d. Base findings on personal interpretations
49. What is the role of data cleaning in analysis?
    a. To remove errors and inconsistencies in the dataset
    b. To add new variables to the research findings
    c. To change data values to fit expectations
    d. To discard missing values without consideration

50. Which visualization tool is best for showing relationships between two numerical variables?
    a. Pie chart
    b. Line graph
    c. Scatter plot
    d. Bar chart
51. A strong correlation between two variables indicates:
    a. A direct cause-effect relationship
    b. That further research is necessary to confirm causality
    c. The data is flawed and must be revised
    d. That one variable automatically determines the outcome of another
52. How can outliers impact data interpretation?
    a. They can distort trends and influence statistical conclusions
    b. They always represent errors in data collection
    c. They should be removed without further investigation
    d. They confirm the validity of a dataset
53. Which strategy is best for structuring the discussion section?
    a. Relating findings to the research objectives and past studies
    b. Listing raw data without any interpretation
    c. Avoiding comparisons with existing literature
    d. Modifying findings to match expectations
54. Why is it important to mention study limitations in the discussion?
    a. To help readers understand possible constraints that affected results
    b. To weaken the credibility of the findings
    c. To avoid future research in the same area
    d. To justify altering conclusions
55. What is the purpose of comparing findings with existing research?
    a. To validate study results and explore their significance
    b. To prove previous studies were incorrect
    c. To make the discussion more complex
    d. To introduce new research questions
56. A well-structured conclusion must:
    a. Offer a summary of key findings and implications
    b. Introduce a new research methodology
    c. Repeat the discussion section word for word
    d. Provide only general statements
57. What is the best approach when making recommendations ?
    a. Align suggestions with study findings and stakeholder needs
    b. Provide vague recommendations without justification
    c. Avoid suggesting any future research
    d. List personal opinions unrelated to the study
58. Why should researchers clearly identify actionable recommendations ?
    a. To ensure findings are applied effectively in real-world situations
    b. To avoid further investigation in the field
    c. To generalize results without precision
    d. To make conclusions appear more complex
59. Which of the following weakens a conclusion?
    a. Providing well-supported recommendations
    b. Ignoring study limitations
    c. Summarizing findings clearly
    d. Relating results to research objectives
60. How can a researcher ensure their results are reliable ?
    a. Use proper data collection and validation techniques
    b. Rely only on personal opinions in analysis
    c. Remove findings that contradict expectations
    d. Modify statistical outcomes
61. What is the best strategy for writing an effective capstone discussion?
    a. Analyzing and interpreting findings while comparing them with literature
    b. Presenting raw data without explanations
    c. Ignoring unexpected results
    d. Avoiding implications and future research suggestions
62. Which of the following represents ethical research practices ?
    a. Manipulating data to fit a preferred conclusion
    b. Reporting results transparently, including limitations
    c. Ignoring contradictory findings
    d. Avoiding peer review

63. A research study concludes that data interpretation errors affected findings. What should the researcher do?
    a. Acknowledge the error and discuss its impact
    b. Hide the issue and proceed with recommendations
    c. Modify the results to match expectations
    d. Change the methodology entirely
64. What is the best strategy when answering questions during a final defense ?
    a. Provide clear, evidence-based responses
    b. Avoid answering difficult questions
    c. Make speculative claims without data support
    d. Only respond with brief, vague statements
65. A strong research recommendation must be:
    a. Specific, evidence-based, and applicable
    b. Generalized without context
    c. Unrelated to the study
    d. Based on assumptions rather than data
66. What is the main benefit of conducting peer review ?
    a. It enhances research credibility and ensures objectivity
    b. It removes weak findings from the study
    c. It allows researchers to adjust results
    d. It prevents future research on similar topics
67. Why should researchers ensure coherence between written research and oral defense ?
    a. To provide a consistent and well-supported argument
    b. To change findings based on audience preference
    c. To highlight contradictory ideas for debate
    d. To limit discussion points during the defense
68. 68. What role does statistical significance play in data analysis?
    a. It helps determine whether findings are meaningful or due to chance
    b. It automatically proves causality
    c. It eliminates research bias
    d. It disregards sample size considerations
69. When conducting data analysis , researchers must consider:
    a. Bias, accuracy, and sample representativeness
    b. Only the favorable results
    c. The easiest interpretation method
    d. Ignoring the dataset size
70. What is the purpose of a capstone project final defense ?
    a. To demonstrate understanding and mastery of research findings
    b. To add unrelated findings to the study
    c. To avoid discussing limitations
    d. To confirm that only personal opinions matter

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