**CSC 322 REVISION**

**QUESTION ONE**

**The CEO at XYZ limited is worried at the growing trend of employees experienced staff leaving, the organization. Over the past few months, 10 out of 30 key staff have resigned citing various reasons.**

**Assuming the CEO has appointed you to investigate this phenomenon.**

**a) Identify a research topic and briefly illustrate the following:(6 marks)**

**i. The aim of the study**

**Research Topic:** Investigating the Causes of Employee Turnover at XYZ Limited.

**Aim of the Study:** The aim is to identify the root causes of experienced staff leaving XYZ Limited to provide actionable insights for retention strategies.

**ii. TWO objectives of the study**

1. To analyze the factors contributing to employee turnover, including job satisfaction, work-life balance, compensation, and organizational culture.

2. To propose targeted interventions and strategies to reduce employee turnover rates and improve staff retention.

**iii. Null and alternative hypothesis of the research**

**Null Hypothesis (H0):** There is no significant relationship between workplace factors and employee turnover at XYZ Limited.

**Alternative Hypothesis (H1):** There is a significant relationship between workplace factors and employee turnover at XYZ Limited.

**b) Literature review is an important part of research. Explain what literature review is and why you would conduct literature review (6 marks)**

**Literature Review**: A literature review is a systematic analysis of existing research and publications relevant to the research topic.

It helps in understanding the current state of knowledge, identifying gaps, theoretical frameworks, and methodologies used in previous studies. Conducting a literature review is crucial to build a theoretical foundation, inform research questions, and guide the research design and methodology.

**c) Describe the research design you would adopt for the study and explain the choice of research design selected (6 marks)**

I would adopt a **mixed-methods research design** combining quantitative and qualitative approaches. This would involve administering surveys to quantify turnover reasons and conducting interviews or focus groups for in-depth qualitative insights. This mixed-methods approach allows for a comprehensive understanding of the phenomenon, providing both statistical data and rich narratives to inform decision-making.

**d) List and explain FIVE research instruments that can be used in your research (5 marks)**

1. **Surveys/Questionnaires:** To collect quantitative data on turnover reasons, job satisfaction, and demographic information.

2. **Semi-Structured Interviews:** To gather qualitative insights from departing employees and key stakeholders on their experiences and perceptions regarding turnover.

3. **Focus Groups:** To facilitate discussions among employees to uncover shared experiences and perceptions regarding workplace factors influencing turnover.

4. **Exit Interviews:** To gather feedback from departing employees about their reasons for leaving and suggestions for improvement.

5. **Organizational Records Analysis:** To examine historical turnover rates, performance evaluations, and other relevant organizational data.

**e) State FIVE ways that you can use to share your research findings**

1. Presentation to the CEO and management team.

2. Publication in industry journals or newsletters.

3. Conducting seminars or workshops for staff.

4. Posting findings on company intranet or communication channels.

5. Presenting at conferences or industry events.

**f) Explain TWO types of experimental designs (2 marks)**

1. **Between-Subjects Design:** Participants are randomly assigned to different groups, and each group experiences a different condition or treatment. This design helps to compare the effects of different treatments.

2. **Within-Subjects Design:** Each participant experiences all conditions or treatments, serving as their control. This design reduces individual differences and increases statistical power

**QUESTION TWO**

1. **List THREE functions of statistics (5 marks)**

1. **Descriptive Statistics:** Descriptive statistics involve summarizing and describing the main features of a dataset. This includes measures such as mean, median, mode, standard deviation, and range, which provide insights into the central tendency, dispersion, and shape of the data distribution.

2. **Inferential Statistics:** Inferential statistics allow researchers to make inferences or predictions about a population based on a sample of data. By analyzing sample data, inferential statistics help in drawing conclusions, testing hypotheses, and generalizing about the larger population.

3. **Predictive Analytics:** Statistics are used for predictive modeling, which involves analyzing historical data to predict future outcomes. Predictive analytics techniques such as regression analysis, time series analysis, and machine learning algorithms are employed to forecast trends, identify patterns, and make informed decisions.

1. **Define the term "conceptual framework" and explain the importance of a conceptual framework in research. (4 marks)**

**A conceptual framework** is a theoretical structure that outlines the key concepts, variables, relationships, and assumptions underlying a research study. It provides a roadmap for understanding the research problem and guides the development of hypotheses, research questions, and methodology.

The importance of a conceptual framework in research:

**- Provide clarity and focus**: By defining the scope and boundaries of the study, a conceptual framework helps researchers stay focused on relevant variables and relationships.

**- Enhance theoretical understanding:** It helps researchers build on existing theories and concepts by providing a framework for organizing and interpreting empirical findings.

**- Guide research design and methodology:** A conceptual framework informs the selection of research methods, data collection techniques, and analytical approaches that are aligned with the research objectives.

**- Facilitate communication:** It enables researchers to communicate their ideas, assumptions, and theoretical perspectives to other scholars, practitioners, and stakeholders.

1. **Explain TWO ways available for researchers to use information gathered from literature sources without accusation of plagiarism (2 marks)**

**1. Proper Citation and Referencing:** Researchers can use information gathered from literature sources without plagiarism by ensuring that they properly cite and reference the original sources. This involves acknowledging the authors' work and providing accurate citations for direct quotations, paraphrases, and ideas borrowed from existing literature.

**2. Paraphrasing and Synthesizing:** Instead of directly copying text from literature sources, researchers can paraphrase the information in their own words and integrate it into their writing. Synthesizing information from multiple sources helps in creating original insights while avoiding plagiarism.

1. **Distinguish between theoretical and empirical literature review, and explain the purpose of each type of review. (4 marks)**

**Theoretical Literature Review:** A theoretical literature review focuses on examining and synthesizing existing theoretical frameworks, concepts, and models relevant to the research topic. Its purpose is to provide a theoretical foundation and conceptual framework for understanding the research problem. Theoretical reviews analyze and critique theoretical perspectives, identify gaps in the literature, and propose theoretical frameworks to guide empirical research.

**Empirical Literature Review:** An empirical literature review involves summarizing and analyzing empirical research studies, experiments, and findings related to the research topic. Its purpose is to review and synthesize empirical evidence, methodologies, and results to support or challenge existing theories and hypotheses. Empirical reviews assess the quality of research studies, identify patterns or inconsistencies in findings, and generate new research questions or hypotheses for further investigation.

**e) Describe the various tools of data collection (5 marks)**

**1. Surveys/Questionnaires:** Surveys involve administering structured questionnaires to gather data from a sample of respondents. They are efficient for collecting large amounts of quantitative data on attitudes, opinions, behaviors, and demographics.

**2. Interviews:** Interviews are one-on-one or group discussions conducted to collect qualitative data by asking open-ended questions and probing for detailed responses. They provide rich insights into participants' perspectives, experiences, and motivations.

**3. Observations:** Observational methods involve systematically observing and recording behaviors, interactions, and events in natural or controlled settings. They are used to gather qualitative or quantitative data on behaviors, patterns, and environmental factors.

**4. Focus Groups:** Focus groups are group discussions facilitated by a moderator to explore specific topics or issues among participants. They provide insights into shared attitudes, opinions, and experiences through group interaction and discussion.

**5. Secondary Data Analysis:** Secondary data refers to existing data collected by other researchers, organizations, or sources for purposes other than the current study. Researchers can analyze secondary data from sources such as government databases, organizational records, and published research studies to answer research questions or test hypotheses.

**QUESTION THREE**

1. **Explain THREE advantages and TWO Disadvantages of sampling during data collection (5 marks)**

**Advantages:**

**1. Cost-Efficiency:** Sampling is often more cost-effective than collecting data from an entire population. It reduces the resources required for data collection, analysis, and processing, especially when dealing with large or inaccessible populations.

**2. Time-Efficiency:** Sampling allows researchers to collect data more quickly than attempting to survey an entire population. This is particularly advantageous when time constraints are present or when frequent data collection is necessary.

**3. Practicality:** Sampling is practical when the population size is too large or dispersed to survey comprehensively. By selecting a representative sample, researchers can generalize findings to the larger population with a reasonable level of confidence.

**Disadvantages:**

**1. Sampling Error:** Sampling introduces the risk of sampling error, which occurs when the characteristics of the sample do not accurately reflect those of the population. This can lead to biased or inaccurate estimates and undermine the validity of research findings.

**2. Limited Generalizability:** While sampling enables researchers to make inferences about a larger population, the extent to which findings can be generalized depends on the representativeness of the sample. Non-random or biased sampling methods may limit the external validity of study results.

1. **Discuss the TWO main sampling techniques (4 marks)**

**1. Probability Sampling:** Probability sampling involves selecting samples based on the principles of probability, where every unit in the population has a known, non-zero chance of being selected. The main types of probability sampling include:

*- Simple Random Sampling:* Each member of the population has an equal chance of being selected.

*- Stratified Sampling:* The population is divided into homogeneous subgroups (strata), and samples are randomly selected from each stratum.

*- Cluster Sampling:* The population is divided into clusters, and a random sample of clusters is selected for inclusion in the study.

**2. Non-Probability Sampling:** Non-probability sampling involves selecting samples without using random selection methods. While it does not ensure every unit in the population has an equal chance of being selected, it is often more convenient and cost-effective. The main types of non-probability sampling include:

*- Convenience Sampling:* Samples are selected based on their convenient availability or accessibility to the researcher.

- *Purposive Sampling:* Samples are selected based on specific criteria determined by the researcher's judgment or purpose of the study.

1. **Outline FIVE situations when large samples may be required (5 marks)**

**1. Heterogeneity:** When the population exhibits high variability or diversity in characteristics, a large sample size is needed to ensure representativeness and capture the full range of variation.

**2. Small Effect Size:** When the expected effects or differences between groups or variables are small, a large sample size is required to detect these effects with sufficient statistical power.

**3. Low Base Rates:** When studying rare events or phenomena with low base rates within the population, a large sample size is necessary to increase the likelihood of encountering enough cases for analysis.

**4. Subgroup Analysis:** When researchers intend to conduct subgroup analyses or comparisons based on specific demographic or categorical variables, a large sample size is needed to ensure each subgroup is adequately represented.

**5. Precision Requirements:** When researchers aim for high levels of precision and narrow confidence intervals in estimating population parameters, a large sample size is necessary to minimize sampling error and increase the accuracy of estimates.

**d) State and explain three features of descriptive survey (6 marks)**

**1. Objective Description:** Descriptive surveys aim to objectively describe characteristics, behaviors, attitudes, or opinions of a population or sample. They provide a snapshot of the current state or status quo without seeking to establish causal relationships.

**2. Structured Instrument:** Descriptive surveys typically use structured questionnaires or interviews with predetermined questions and response options. This ensures consistency and standardization in data collection, allowing for quantitative analysis and comparison of responses.

**3. Cross-Sectional Design:** Descriptive surveys employ a cross-sectional design, where data is collected at a single point in time from a representative sample of the population. This design allows researchers to capture a snapshot of the population's characteristics or opinions at a specific moment.

**QUESTION FOUR**

1. **Explain FIVE reasons why hypothesis is important in research (5 marks)**

**1. Guiding Research Direction:** Hypotheses provide a clear direction and focus for the research by specifying the relationship between variables or the expected outcomes. They help researchers formulate research questions, design studies, and plan data collection methods.

**2. Testability:** Hypotheses are formulated in a way that allows them to be empirically tested and evaluated through data collection and analysis. They enable researchers to determine whether their predictions are supported by evidence, contributing to the advancement of knowledge.

**3. Framework for Interpretation:** Hypotheses provide a framework for interpreting research findings by establishing expectations about the relationships between variables or the outcomes of the study. They guide the interpretation of statistical analyses and help draw meaningful conclusions from the data.

**4. Falsifiability:** Hypotheses are formulated in a way that allows them to be potentially disproven or falsified through empirical testing. This principle of falsifiability distinguishes scientific hypotheses from mere speculation and ensures rigor and accountability in research.

**5. Facilitating Communication:** Hypotheses communicate the researcher's expectations and predictions to other scholars, practitioners, and stakeholders in the field. They facilitate dialogue, critique, and collaboration, promoting the exchange of ideas and the advancement of scientific knowledge.

1. **Discuss reasons why a research proposal is important (4 marks)**

**1. Clarifying Research Objectives:** A research proposal outlines the research objectives, questions, and hypotheses, providing clarity on the purpose and scope of the study. It helps researchers articulate their research goals and justify the significance of the proposed research.

**2. Securing Funding and Resources:** Research proposals are often required when seeking funding or resources for research projects. They provide detailed information on the research plan, methodology, budget, and timeline, enabling funding agencies, institutions, or sponsors to evaluate the feasibility and merit of the proposed research.

**3. Ethical Considerations:** Research proposals address ethical considerations and ensure that research is conducted in accordance with ethical principles and guidelines. They describe procedures for obtaining informed consent, protecting participant confidentiality, and minimizing potential risks or harm to participants.

**4. Planning and Organization:** Research proposals help researchers plan and organize their research activities, including data collection, analysis, and dissemination. They provide a roadmap for conducting the study, outlining the research design, methodology, and timeline for completion.

1. **Research involves extracting meaning from facts. Outline three methods that are used to extract meaning from facts (3 marks)**

**1. Statistical Analysis:** Statistical methods are used to analyze and interpret data, uncovering patterns, relationships, and trends within the dataset. Techniques such as descriptive statistics, inferential statistics, and multivariate analysis help researchers identify significant findings and draw conclusions from the data.

**2. Qualitative Analysis:** Qualitative methods involve analyzing textual or narrative data to identify themes, categories, and patterns. Techniques such as content analysis, thematic analysis, and grounded theory help researchers extract meaning from qualitative data by systematically coding and interpreting the information.

**3. Data Visualization:** Data visualization techniques such as charts, graphs, and maps are used to visually represent data and convey complex information in a clear and concise manner. Visualizations facilitate the exploration and interpretation of data, enabling researchers to identify trends, outliers, and relationships.

**d) Explain in brief the stages in data processing (5 marks)**

**1. Data Collection:** The first stage involves gathering raw data from primary or secondary sources using various data collection methods such as surveys, interviews, observations, or archival research.

**2. Data Cleaning:** In this stage, the collected data is cleaned and prepared for analysis by identifying and correcting errors, inconsistencies, or missing values. Data cleaning ensures the accuracy and reliability of the dataset.

**3. Data Analysis:** The processed data is analyzed using statistical or qualitative techniques to identify patterns, relationships, and trends. This stage involves applying appropriate analytical methods to address the research questions or hypotheses.

**4. Interpretation:** Once the data analysis is complete, researchers interpret the findings by drawing conclusions, making inferences, and discussing the implications of the results in relation to the research objectives.

**5. Reporting:** The final stage involves documenting and communicating the research findings through reports, publications, presentations, or other dissemination channels. Researchers summarize the study methods, results, and conclusions, providing transparency and accountability in the research process.

**e) What is the importance of a research report (3 marks)**

**1. Dissemination of Findings:** A research report communicates the findings of the study to the broader academic community, practitioners, policymakers, and other stakeholders. It facilitates the sharing of knowledge, insights, and discoveries, contributing to the advancement of the field.

**2. Validation and Replication:** Research reports provide a detailed account of the study methodology, data analysis, and results, allowing other researchers to evaluate the validity and reliability of the findings. They enable validation and replication of the study by providing transparency and documentation of the research process.

**3. Reference for Future Research:** Research reports serve as a reference for future research endeavors by documenting the research methods, literature review, and theoretical framework. They provide a foundation for building on existing knowledge, identifying research gaps, and generating new research questions or hypotheses.