# SHRI GURU NANAK DEGREE COLLEGE,

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## BCH402: Research Methodology

### Section A: Long Answer Questions

#### Unit 1 – Research Methodology: Introduction

1. Define research. Explain the nature and scope of research in business.
2. Discuss the importance and role of business research in decision-making.
3. Explain the various types of research: Exploratory, Descriptive, and Experimental.
4. What are the advantages and limitations of business research?
5. Describe the characteristics of a good research study.
6. Compare and contrast Exploratory and Descriptive research.
7. Explain the different characteristics of research.
8. Discuss the need and relevance of research in modern business.
9. What are the essential features of a good research problem?
10. Differentiate between basic and applied research with examples.
11. How does research contribute to theory building and practical problem-solving?
12. Critically evaluate the limitations of research in business.
13. Discuss the ethical considerations in business research.

#### Unit 2 – Research Process and Research Design

1. Explain the steps involved in the research process in detail.
2. Define problem formulation. How do you identify and formulate a research problem?
3. What are research objectives? Discuss the characteristics of well-defined objectives.
4. Discuss the significance of defining a research problem.
5. Explain the concept of a research design. Why is it important in research?
6. Differentiate between exploratory, descriptive, and experimental research design.
7. Explain the types of research design with suitable examples.
8. Discuss the relationship between problem formulation and research design.
9. How do objectives help in guiding the research process?
10. Explain how a research design ensures the validity and reliability of research findings.
11. Elaborate on the criteria for selecting an appropriate research design.
12. What is hypothesis formulation? How is it related to research objectives?
13. Explain the importance of aligning research questions with the research

process.

### Unit 3 – Sampling and Data Collection

1. Define sampling. Explain its importance in research.
2. What are the various types of sampling techniques? Explain with examples.
3. Describe the steps involved in the sampling process.
4. Differentiate between probability and non-probability sampling methods.
5. What are the common sampling errors? How can they be minimized?
6. Discuss the concept of sample size and the factors affecting it.
7. What is the difference between census and sampling methods of data collection?
8. Explain the classification of data: primary and secondary data.
9. Describe the tools and methods used for primary data collection.
10. What are the advantages and limitations of secondary data?
11. Explain the importance of data accuracy and reliability in research.
12. Discuss the ethical issues involved in data collection.
13. Compare and contrast different methods of data collection used in social science research.

### Unit 4 – Hypothesis Testing and Statistical Tools

1. Define hypothesis. What are the characteristics of a good hypothesis?
2. Explain the importance of hypothesis testing in research.
3. Discuss the steps involved in hypothesis testing.
4. Distinguish between null hypothesis and alternative hypothesis with examples.
5. What are Type I and Type II errors? How do they impact hypothesis testing?
6. Explain the applications of the t-test in research analysis.
7. What is the Z-test? When is it used? Explain with examples.
8. Describe the F-test and its applications in testing hypothesis.
9. Explain the concept of p-value and its role in hypothesis testing.
10. How do you decide the level of significance in hypothesis testing?
11. Compare parametric and non-parametric tests.
12. What are the assumptions underlying the use of t, z, and F tests?
13. Discuss the use of statistical packages in hypothesis testing.

## ● Section B: Short Answer Questions

### Unit 1 – Research Methodology: Introduction

1. Define research.
2. What is the scope of business research?
3. List any three types of research.
4. State two limitations of research.
5. Mention any three characteristics of research.
6. What is the role of research in business?
7. Define exploratory research.
8. Mention any two features of good research.
9. Define experimental research.
10. What is descriptive research?
11. What are the advantages of business research?

12. Define applied research.
13. Write any two ethical aspects in research.

## Unit 2 – Research Process and Research Design

1. What is a research process?
2. Define research problem.
3. What are research objectives?
4. Mention two characteristics of a good research design.
5. What do you mean by problem formulation?
6. Name any two types of research design.
7. What is the role of objectives in research?
8. Define exploratory research design.
9. Mention one difference between descriptive and experimental design.
10. What is the significance of a research design?
11. How is a hypothesis related to research objectives?
12. Define a structured research process.
13. Write any two features of a good research problem.

## Unit 3 – Sampling and Data Collection

1. Define sampling.
2. What is the significance of sample size?
3. List two probability sampling methods.
4. Name two non-probability sampling techniques.
5. What is a sampling error?
6. Write two differences between primary and secondary data.
7. Mention two methods of primary data collection.
8. What is stratified sampling?
9. Define quota sampling.
10. What is the role of data in research?
11. State two tools of data collection.
12. What is a structured questionnaire?
13. Define secondary data.

## Unit 4 – Hypothesis Testing and Statistical Tools

1. Define hypothesis.
2. What is a null hypothesis?
3. What is meant by an alternative hypothesis?
4. Define Type I error.
5. Define Type II error.
6. What is a t-test used for?
7. What is the purpose of hypothesis testing?
8. When do we use the Z-test?
9. What is an F-test?
10. What is a p-value?
11. Define level of significance.
12. Mention one difference between parametric and non-parametric tests.
13. What is the importance of statistical tools in research?

## Section C: Multiple Choice Questions (MCQs)

### Unit 1 – Research Methodology: Introduction

1. Research is a: (a) Systematic process (b) Random process (c) Assumption (d) Guess
2. Descriptive research is used to: (a) Explore new areas (b) Describe characteristics (c) Prove hypothesis (d) None
3. Which is not a characteristic of research? (a) Objective (b) Logical (c) Subjective (d) Systematic
4. Experimental research is also known as: (a) Applied (b) Causal (c) Exploratory (d) Basic
5. A good research problem must be: (a) Vague (b) Feasible (c) Illogical (d) Ambiguous
6. Business research primarily helps in: (a) Marketing (b) Finance (c) Decision making (d) None
7. Which type of research is conducted for a new idea? (a) Descriptive (b) Exploratory (c) Applied (d) Causal
8. The primary aim of research is: (a) Entertainment (b) Understanding phenomena (c) Waste resources (d) Confuse others
9. Which one is a limitation of research? (a) Bias (b) Objectivity (c) Accuracy (d) Clarity
10. Applied research aims at: (a) Theory building (b) Immediate solution (c) Curiosity (d) Abstract ideas
11. Exploratory research deals with: (a) Quantitative data (b) In-depth analysis (c) Testing hypothesis (d) Prelim inquiry
12. One key feature of good research is: (a) Vagueness (b) Replicability (c) Randomness (d) None
13. Basic research is also known as: (a) Fundamental research (b) Applied research (c) Descriptive research (d) Experimental

### Unit 2 – Research Process and Research Design

1. The first step in research process is:

(a) Data Collection (b) Problem Identification (c) Hypothesis Testing (d) Report Writing
2. Research design is a:

(a) Blueprint for conducting research (b) Data gathering tool (c) Sampling method (d) Software
3. A good research problem must be:

(a) Complex (b) General (c) Specific and researchable (d) Opinion-based
4. Which one is a type of research design?

(a) Observational (b) Longitudinal (c) Experimental (d) Random
5. Research objectives are derived from:

(a) Research findings (b) Literature review (c) Research questions (d) Data

6. Descriptive research design is used to:

(a) Explore phenomena (b) Test hypothesis (c) Describe characteristics (d) Validate tools
7. Which design is best for cause-effect relationships?

(a) Descriptive (b) Experimental (c) Exploratory (d) Theoretical
8. In research process, hypothesis formulation is:

(a) Last step (b) First step (c) Midway process (d) Optional
9. A research objective must be:

(a) Vague (b) Action-oriented (c) Philosophical (d) Theoretical
10. Problem formulation comes:

(a) After hypothesis (b) Before objectives (c) After objectives (d) After data collection
11. Research design determines:

(a) Budget only (b) Sampling only (c) Overall strategy (d) Only literature
12. A variable that affects research design is:

(a) Hypothesis (b) Data format (c) Timeline (d) Population
13. Which of the following is not a component of research design?

(a) Sampling design (b) Observational method (c) Operational design (d) Statistical design

## Unit 3 – Sampling and Data Collection

1. Which of the following is a probability sampling method?

(a) Judgment sampling (b) Snowball sampling (c) Simple random sampling (d) Quota sampling
2. Stratified sampling involves:

(a) Dividing population into strata (b) Selecting convenience samples (c) Collecting census data (d) Only qualitative data
3. Primary data is collected:

(a) From books (b) By personal observation (c) From reports (d) From libraries
4. Secondary data is:

(a) Collected firsthand (b) Raw data (c) Already published data (d) Unstructured
5. Which of the following is a source of secondary data?

(a) Surveys (b) Interviews (c) Government publications (d) Focus group
6. Sample size depends on:

(a) Time and budget (b) Number of researchers (c) Interviewer skill (d) Literature

review
7. Non-probability sampling includes:

(a) Cluster sampling (b) Simple random sampling (c) Quota sampling (d) Stratified sampling
8. Convenience sampling is based on:

(a) Random selection (b) Budget (c) Ease of access (d) Systematic plan
9. A major limitation of non-probability sampling is:

(a) Bias (b) Costly (c) Time-consuming (d) Technical
10. Which one is a data collection tool?

(a) Hypothesis (b) Interview schedule (c) Literature review (d) Report writing
11. Snowball sampling is ideal for:

(a) Known populations (b) Hidden populations (c) Government surveys (d) Academic exams
12. Which of these is a primary data collection method?

(a) Census report (b) Focus group discussion (c) Annual report (d) Journals
13. Sampling frame is:

(a) A data chart (b) A list of population elements (c) A questionnaire (d) None

## Unit 4 – Hypothesis Testing and Statistical Tools

1. A hypothesis is:

(a) A conclusion (b) A research problem (c) A tentative assumption (d) None
2. Null hypothesis is denoted by:

(a) H1 (b) H2 (c) H0 (d) Hn
3. Type I error means:

(a) Accepting a true null hypothesis (b) Rejecting a true null hypothesis (c) Accepting a false hypothesis (d) None
4. Type II error occurs when:

(a) Null hypothesis is true and rejected (b) Null hypothesis is false and accepted (c) Both (a) and (b) (d) None
5. The t-test is used when:

(a) Sample size > 30 (b) Variance known (c) Sample size < 30 (d) Data is secondary
6. The Z-test assumes:

(a) Small sample (b) Normal distribution (c) Unknown variance (d) None
7. F-test is generally used to compare:

(a) Means (b) Variances (c) Medians (d) Correlations
8. The p-value less than 0.05 generally indicates:

(a) Hypothesis accepted (b) Hypothesis rejected (c) No conclusion (d) Test failed
9. Level of significance is generally denoted by:

(a) α (alpha) (b) β (beta) (c) δ (delta) (d) σ (sigma)
10. If $p > 0.05$, we usually:

(a) Reject H0 (b) Accept H1 (c) Do not reject H0 (d) None
11. In hypothesis testing, F-test is used for:

(a) Comparing means (b) Comparing ratios (c) Comparing variances (d) Comparing scores
12. A smaller p-value indicates:

(a) Strong evidence against H0 (b) Strong support for H0 (c) Inconclusive results (d) Randomness
13. Parametric tests are applicable when:

(a) Population is non-normal (b) Population is normal (c) Data is ordinal (d) Data is nominal