

1.

(I.) (Any two) It is flexible in nature, ordinarily uses non-probability sampling.

(II.) Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. It provides basis for government budget and policies. It is also helpful in solving the economic problems like- Inflation, Recession, Problem in international trade and economic development etc.

(III.) (Any two) Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by the researcher in studying his research problem along with the logic behind them.

Research methodology has many dimensions and research methods do constitute a part of the research methodology. Research method is the method by which you conduct a research into a subject or a topic like methods of data collection, data analysis etc.

(IV.) Rejecting the null hypothesis when it is true is called Type I error. It is also called Alfa error.

(V.) Random Sampling is also known as probability sampling or chance sampling. Under this sampling design, every item of the universe has an equal chance of inclusion in the sample.

(VI.) The term population refers to the total of items about which information is desired. Whereas source list or sampling frame contains the names of items (all items in case of finite universe only) from which sample is to be drawn. in case of infinite universe sampling frame is smaller than the population.

(VII.) Standard deviation refers to the amount you expect an individual measurement to vary from the average. Standard error of the mean is how much you expect a value averaged from several measurements to vary from the true mean. Standard Error is the standard deviation of the sample mean \bar{x} , and describes its accuracy as an estimate of the population mean μ .

(VIII.) *Participant observation* is the process enabling researchers to learn about the activities of the people under study in the natural setting through *observing* and participating in those activities.

(IX.) (Any two) To communicate the research findings to others.
To enhance the general store of knowledge and providing inputs to policy makers.

(X.) (Any two) It should be long enough to cover the subject but short enough to maintain the interest of readers. The report must present the logical analysis of the subject matter.

Section 'B'

2.

(i) Extraneous variable: The independent variables which are not a part of research study but still affect the depended variable in some way are called extraneous variable.

(ii) Confounded Relationship: If the depended variable is not free from the effect of extraneous variable, then the relationship between the dependent and independent variable is termed as confounded relationship.

(iii) Research Hypothesis: A research hypothesis means a mere assumption, assertion or an idea about a phenomenon, some supposition to be proved or disproved. But for a researcher hypothesis is a formal question that he intends to resolve. In most studies the hypothesis will be based upon either previous studies or researcher observation. It is written in such a way that it can be proven or disproven by valid and reliable data. A proposition that is stated in a testable form and that predicts a particular relationship between two or more variables.

(iv) Experimental and control groups: Experimental group is that on which treatment has been introduced, or that has been kept under some novel or special conditions during the study. Control group is that on which no specific treatment is being used or that has been kept in the usual conditions during the study.

(v) Treatment: The term 'treatment' is used to denote or refer those special conditions under which experimental group is being kept to examine the effects during the study.

3. The research design is the conceptual structure within which research is conducted.

Features of Research Design

- It is plan that specifies the sources and types of information relevant to the research problem.
- It is a strategy specifying which approach will be used for gathering and analyzing the data.
- It also includes the time and cost budgets since more studies are done under this two constraints.
- Research design in case of hypothesis-testing research studies: Hypothesis-testing research studies are those where the researcher tests the hypotheses of causal relationship between variables. Such studies require procedures that will not only reduce bias and increase reliability, but will permit drawing inferences about causality.

- Experimental Research Designs

Professor R.A. Fisher's name is associated with experimental design Experimental Designs refers to the framework or structure of an experiment and as such there are several experimental designs.

Explain in detail the following:

- a) Before –and-After without control design
- b) After-only with control design.
- c) Before -and–after-with control design

4. Sampling design: A sample design is made up of two elements- Sampling method. *Sampling* method refers to the rules and procedures by which some elements of the population are included in the sample. Some common sampling methods are simple random sampling, stratified sampling, and cluster sampling. The "best" sample design depends on survey objectives and on survey resources. For example, a researcher might select the most economical design that provides a desired level of precision. Or, if the budget is limited, a researcher might choose the design that provides the greatest precision without going over budget.

Points should be taken into considerations by a researcher in developing a sample design for a research project:

- **Representativeness:** When sampling method is adopted by the researcher, the basic assumption is that the samples so selected out of the population are the best representative of the population under study. Thus good samples are those who accurately represent the population. Probability sampling technique yield representative samples. On measurement terms, the sample must be valid. The validity of a sample depends upon its accuracy.
- **Accuracy:** Accuracy is defined as the degree to which bias is absent from the sample. An accurate (unbiased) sample is one which exactly represents the population. It is free from any influence that causes any differences between sample value and population value.
- **Size:** A good sample must be adequate in size and reliable. The sample size should be such that the inferences drawn from the sample are accurate to a given level of confidence to represent the entire population under study.etc.

5. SIGNIFICANCE OF REPORT WRITING

The research task remains incomplete till the report has been presented and/or written. Research results must invariably enter the general store of knowledge.

DIFFERENT STEPS IN WRITING REPORT:

Preparation of the outline: It is the first step in writing the research report “Outlines are the framework upon which long written works are constructed. They are an aid to the logical organization of the material and a reminder of the points to be stressed in the report.”

Preparation of the rough draft: This follows the logical analysis of the subject and the preparation of the final outline. Such a step is of utmost importance for the researcher now sits to write down what he has done in the context of his research study. He will write down:

- the procedure adopted in collecting the material along with various limitations faced by researcher,
- the technique of analysis adopted by researcher,
- the broad findings and generalizations
- and the various suggestions regarding the problem concerned.

Rewriting and polishing of the rough draft: This step happens to be most difficult part of all formal writing. Usually this step requires more time than the writing of the rough draft. The careful revision makes the difference between a mediocre and a good piece of writing. While rewriting and polishing, one should check the report:

- for weaknesses in logical development or presentation,
- whether or not the material, as it is presented, has unity and cohesion;
- does the report stand upright and firm and exhibit a definite pattern, Or does it resemble an old wall of moldering cement and loose brick”
- In addition the researcher should give due attention to the fact that in his rough draft he has been consistent or not.
- He should check the mechanics of writing-grammar, spelling and usage.

Preparation of the final bibliography: Next in order comes the task of the preparation of the final bibliography. The bibliography, which is generally appended to the research report, is a list of books, pamphlets, journals, reports, news papers in some way pertinent to the research which has been done. It should contain all those works which the researcher has consulted.

The bibliography should be arranged alphabetically and may be divided into two parts;

- the first part may contain the names of books and pamphlets,
- and the second part may contain the names of magazine and newspaper articles.

Generally,APA and MLA pattern of bibliography is considered convenient and satisfactory from the point of view of reader, though it is not the only way of presenting bibliography.

Writing the final draft: This constitutes the last step. The final draft should be written:

- in a concise and objective style,
- and in simple language,
- avoiding vague expressions such as “it seems”, “there may be”, and the like ones.
- While writing the final draft, the researcher must avoid abstract terminology and technical jargon.
- Illustrations and examples based on common experience must be incorporated in the final draft as they happen to be most effective in communication the research findings to others.
- A research report should not be dull, but must enthuse people and maintain interest and must show originality.
- It must be remembered that every report should be an attempt to solve some intellectual problem and must contribute to the solution of problem and must add to knowledge of both the researcher and the reader.

6.

(i) Criteria of good research:

- One of the important characteristics of a good research is that the purpose of the research is clearly defined. A research study with clearly defined purpose finds a wider acceptance and acknowledgement within the research community.
- Second important characteristic of a good research is that the research method should be defined in a clear manner with sufficient detail. This will allow the repetition of the study in future for further advancement, while maintaining the continuity of what has been done in the past.
- The third thing to remember is that any limitations and assumptions made by the researcher during the course of the study should be clearly highlighted in the research. This will support the findings of the research study, in case someone tries to validate the study findings.
- The fourth thing to remember is that, as far as possible, the research design should be planned in a way that the results generated are as objective as possible. This will provide an easier understanding about the findings of the research.
- Another thing to be considered by the researcher is that there should be sufficient data to investigate the research topic. And the researcher should carefully check the reliability and validity of the data.
- Further, in order to deliver a good research, a researcher should confine the conclusions to those justified by the data.

(ii) Various steps of research: Explain the following in brief

- Formulating the research problem
- Study of related literature
- Development of working hypothesis
- Preparing the research design
- Determining sample design
- Collecting the data
- Execution of the project
- Analysis of data
- Hypothesis testing
- Generalisation and interpretation
- Preparation of the report or the thesis

7 .Difference between Schedule and Questionnaire.

	Questionnaire	Schedule
1.	Questionnaire is generally sent through mail to informants to be answered as specified in a covering letter, but otherwise without further assistance from the sender.	A schedule is generally filled by the research worker or enumerator, who can interpret the questions when necessary.
2.	Data collection is cheap and economical as the money is spent in preparation of questionnaire and in mailing the same to	Data collection is more expensive as money is spent on enumerators and in imparting trainings to them. Money is

	respondents.	also spent in preparing schedules.
3.	Non response is usually high as many people do not respond and many return the questionnaire without answering all questions. Bias due to non response often remains indeterminate.	Non response is very low because this is filled by enumerators who are able to get answers to all questions. But even in this their remains the danger of interviewer bias and cheating.
4.	It is not clear that who replies.	Identity of respondent is not known.
5.	The questionnaire method is likely to be very slow since many respondents do not return the questionnaire.	Information is collected well in time as they are filled by enumerators.
6.	No personal contact is possible in case of questionnaire as the questionnaires are sent to respondents by post who also in turn returns the same by post.	Direct personal contact is established
7.	This method can be used only when respondents are literate and cooperative.	The information can be gathered even when the respondents happen to be illiterate.
8.	Wider and more representative distribution of sample is possible.	There remains the difficulty in sending enumerators over a relatively wider area.
9.	Risk of collecting incomplete and wrong information is relatively more under the questionnaire method, when people are unable to understand questions properly.	The information collected is generally complete and accurate as enumerators can remove difficulties if any faced by respondents in correctly understanding the questions. As a result the information collected through schedule is relatively more accurate than that obtained through questionnaires.
10.	The success of questionnaire methods lies more on the quality of the questionnaire itself.	It depends upon the honesty and competence of enumerators
11.	The physical appearance of questionnaire must be quite attractive.	This may not be the case as schedules are to be filled in by enumerators and not by respondents.
12.	This is not possible when collecting data through questionnaire.	Along with schedule observation method can also be used.

8.

Primary Data

- Primary data are always original as it is collected by the investigator.
- Suitability of the primary data will be positive because it has been systematically collected.
- Primary data are expensive and time consuming.
- Extra precautions are not required.
- Primary data are in the shape of raw material.
- Possibility of personal prejudice.

Secondary Data

- Secondary data lacks originality. The investigator makes use of the data collected by other agencies.
- Secondary data may or may not suit the objects of enquiry.
- Secondary data are relatively cheaper.
- It is used with great care and caution.
- Secondary data are usually in the shape of readymade products.
- Possibility of lesser degree of personal prejudice.

SOURCES OF SECONDARY DATA

Secondary data is data collected by someone other than the user. Common sources of secondary data for social science include censuses, surveys, books, journals, internet, newspapers, government reports, organizational records etc. Secondary data analysis saves time that would otherwise be spent collecting data and, particularly in the case of quantitative data, provides larger and higher-quality databases that would be unfeasible for any individual researcher to collect on their own. In addition, analysts of social and economic change consider secondary data essential, since it is impossible to conduct a new survey that can adequately capture past change and/or developments.
