

M.Sc. (First Semester) Examination, 2015-16

Rural Technology

Paper RT-701

Research Methodology

Answer ①

- (i) (c) Scientific Method
- (ii) (d) None of these
- (iii) (c) Latin Squares Design
- (iv) (a) H_0
- (v) (d) Production
- (vi) (b) Interview
- (vii) (a) Laboratory and field experiment
- (viii) (d) All of these
- (ix) (d) All of these
- (x) (b) Only Qualitatively

Answer ②

"Research methodology is a way to solve systematically solve the research problem."
A/c to C.R. Kothari

Research methodology is a process in which various stages of analysis are employed to solve the research problem.

A/c to Anonymous

From the above definitions the research methodology may be understood as a way or method

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or process in which various stages of analysis are employed systematically to solve the research problem and how research is done scientifically.

In research methodology, we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them, i.e.

Why: a research study was has been taken?

How: the research problem has been defined?

How: the research hypothesis has been formulated?

What: what data have been collected?

How: the data have been analysed?

and a host of similar other questions are usually answered covering a research problem.

The research methodology, if scientifically developed, enables the researcher to establish with a high degree of confidence cause and effect relationships between the research activities and observed outcomes.

Answer (3)

"Research design is the plan, structure and strategy of investigations so as to obtain answers to research questions and control variance."

Alc tu Kerlinger

Needs of research design (A/c to Kerlinger)

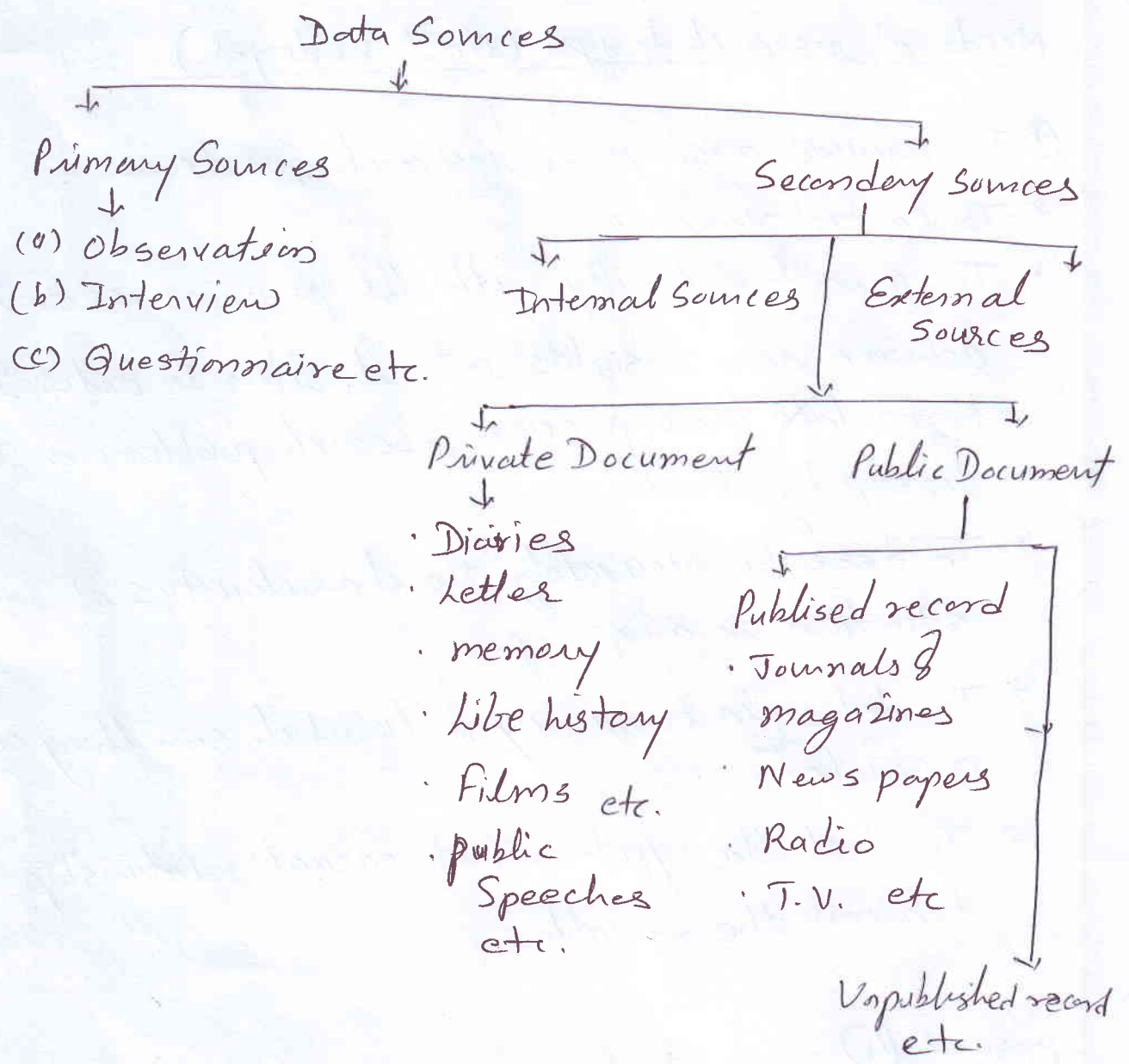
- ⊛ To provide answers to research questions.
- * To control variance.
- * To gain familiarity with the phenomena or to achieve new insights into it, often in order to formulate more precise research problem or to develop hypothesis.
- * To describe accurately the characteristics of individual situation or a group.
- * To determine frequency with which something occurs/ associated.
- * To test the hypothesis of casual relationship between the variables.

Answer (4)

The sources of information are generally classified as primary and secondary data. Primary data refers to information that is generated to meet the specific requirement of the investigation at hand.

On the other hand, secondary data is information that is collected for purpose other than the specific problem under investigation.

The investigator must decide at the outset whether he will use or, secondary data in an investigation.



Answers (5)

"Observation could be defined as the careful and systematic watching of facts as they occur in the course of nature."

Advantages of observation

The following are the advantages of the observation.

- ① The behaviour of the member of the group is observed under natural condition.
e.g. Activities of the farmers in field trips.

- (2) It is possible to get minute and hidden facts, even in the non-participant of the observes.
e.g. Kishan melas, minute observation of the farmers can be seen, without participation.
- (3) The researcher can easily learn a wide variety of intimate details and to interpret the observations.
e.g. Farmers group discussions.
- (4) Complete through purely scientific and objective method of data collection is possible.
e.g. observing the spraying techniques used by the farmers, while undertaking plant protection measures.
- (5) Missing of data is not possible because the researcher himself is recording the data as such when observation and omission of data does not arise.
e.g. Field trips.

Limitation of observation

- (1) Sometimes being an active member of the situation, the investigation become emotional, gets biased and hence chances for forgetting to record many important points.
e.g. observation regarding ~~sever~~ severe blood & wind.

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- (2) Sometimes it is not possible to have close observation who are far away from trips, when they are active participants.
- (3) e.g. observing the activities of the tribal people.
- (3) Sometimes the investigators may not be allowed to participate in some of the functions like, death and marriage ceremony of certain castes.
- (4) The researcher ~~may~~ sometimes may not understand that, why part of certain activities because he is not actively involved in the situation.
- e.g. Informal discussion of the farmers on the local problem.
- (5) Sometimes the researcher may not have seen the things closely due to ~~too~~ crowded where he is non-participant.
- e.g. Kishan mela and crowded exhibitions.

Answer (6)

It has the highest level of measurement. It has all the properties of the interval scale and also known ratio of any two scale values. Ratio scales have an absolute or true zero

of measurement.

Properties

- Equivalence
- Greater than
- Less than
- Known ratio of any two intervals.
- Known ratio of any two scale values.

Example : Weight, height, year of experience. etc.

Answer (7)

Preliminary Section

- (i) The title page,
- (ii) Certificate - I & II
- (iii) Preface including acknowledgements.
- (iv) Table of contents.
- (v) Lists of tables.
- (vi) List of figures
- (vii) List of abbreviations

Title page :

The first page of the report is the title page. The title page should carry a concise and a adequately descriptive title of the research study. Although title page format differ from one institution to another.

Model page

"A Study on Recommended Wheat Production Technology among the Farmers of Kori Village in Bilaspur District"

Dissertation submitted to the Partial fulfillment for the Degree of Rural Technology



2000-2001

by

Yogesh Shivastava

Department of Rural Technology and Social Development
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Jun - 2001

Answer 8 Objectives are very essential not only in programme planning but also in research problem. Without objectives there is no research. Hence objectives are very important in research.

① "Objectives are expression of the ends towards which our efforts are directed."

② "Objectives are defined as directions of movements."

The scope of your research is determined by what you want to achieve (your objectives). Before you get started it is essential to define your objectives, ask yourself these three questions.

- What is the purpose of the research?
- What information is being sought?
- How will the information be used?

There are two levels of objectives.

① General objective ② Specific objective

① General objective: The general objective broadly states why the research study shall be done.

- It is more abstract and conceptual in nature.
- The general objective is briefly expressed in two or more sentences.

Ex: A study on Adoption of Recommended Wheat Production Technology among the Farmers of Koni Village of Bilaspur District of Chhattisgarh State.

② Specific objective: The general objective is elaborated in the specific objective, which broadly state the direction of research study, based on the general objectives.

- A manageable number of specific objectives are selected which shall act as guidance for the entire research work.
 - It clearly states what specific job is to be done for the particular research.
 - The specific objectives bring clarity in research.
 - Hypothesis for testing are generally formulated on the basis of specific objectives of research.
- Ex.: To study the Socio-economic characteristics of farmers.
- To study the Attitude of farmers towards Entrepreneurship development. etc.

Answer (9) Technical reporting is the oral or written presentation of the evidence and the findings in such detail and form as to be readily understood and assessed by the reader and as to enable him to verify the validity of the conclusions. Such reporting should be of problem, the method, the facts and conclusions in themselves as well as in their inter-relationships. This makes reporting not only an inherent and integral part of the research effort but also, and more so, the culmination of the investigation. It also helps the researcher

himself to evaluate the success of his research effort and, in this process, to clarify and check his own thoughts.

General outline of technical report.

1. Problems
2. Author name's
3. Abstracts
4. Introduction
5. Review of literature.
6. Research methodology
7. Result and Discussion
8. Conclusions
9. References.

Answer (10)

In Sociology, quantitative research refers to the systematic empirical investigation of social phenomena via statistical, mathematical or numerical data or computational techniques.

Quantitative research is explaining phenomena by collecting numerical data that are analysed using mathematically based method. (in particular statistics)
(A/c to Aliaga and Gunderson 2000)

Main Characteristics of Quantitative Research

- The data is usually gathered using more structured research instruments.
- The research one based on larger sample sizes that are representative of the population.
- The research study can usually be replicated or repeated given its high reliability.
- Researcher has a clearly defined research question to which objective answers are sought.
- All aspects of the study are usually designed before data is collected.
- Data are in form of numbers and statistics.
- Project can be used to generalize concepts more widely, predict future results, or investigate causal relationships.
- Researcher uses tools, such as questionnaires or equipment to collect numerical data.

Qualitative Research

Qualitative research are the understand and social interaction. There are the smaller group studied. Qualitative data such as open ended response, interview, participant and observation.

Types of Qualitative Research:

- ① Focus group
- ② Observation
- ③ Interview etc.

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Ans. (11) Different types of Questions

The different types of questions that are asked in a schedule are :-

① structured questions: When answer to a question has been preconceived and classified into possible groups, it is known as structured question. Generally, the answer to these questions may either be number or some specific words.

ex: What is your ~~matex~~ marital status at present?
single/married/Divorced/separated/widowed

② Open end Questions: Generally relate to opinion sought about any particular problem or suggestions invited about it. Naturally answers to these questions are long and varied.

Ex: (i) What do you think are the main causes of present indiscipline among students?
(ii) What suggestions have you to offer to remove it?

③ Dichotomous question: When reply to a question given is from one of the alternatives the question called dichotomous.

Ex: (i) Sex of the informant: Male/female

(ii) Whether he belongs to schedule caste: Yes/No

④ Multiple choice question: It is the opposite from ~~the~~ of dichotomous question. In these questions the

reply is not confined to two alternatives only, but be one among a ~~no~~ number of possible replies. Great care has to be taken that all the alternatives have been included. Generally, a new group known as 'other' is included over the above the possible replies.

Ex: Who takes the final decision regarding expenditure of money?

- (i) Parents
- (ii) All family members together
- (iii) Husband
- (iv) myself
- (v) Any other

⑤ Leading questions: When the reply to the question is suggested in a particular direction it is known as leading.

Ex: It is beneficial for ~~family~~ the whole family if the women do the service: Yes/No.

Hence the question itself is leading to the answer.

⑥ Ranking item question: These questions are given to records the preference of the respondents. Like multiple choice question, they also contain number of alternatives. The difference between these two is ~~what~~ that in multiple choice questions only ^{one} of the answers is to be selected, but in

(14)
(15)

Case of ranking item questions order of preference is to be given for all.

ex: If you ~~over~~^{are} free to choose ~~th~~ from the vehicles ~~itted~~ listed below, which one would you like most to travel: Car, bus, scooter, cycle etc.