

Assignment - 01

- 1) a) According to Clifford woody, write the definition of Research 3

Sol According to Clifford woody, Research comprises defining and redefining problems, formulating hypothesis and suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions to determine whether they fit the formulating hypothesis.

- 1b) Why the Research is most important to everyone's life? Justify your views along with any one real time example observed in recent times.

Everyone's life depends on research because it allows us to broaden our understanding of the world around us, discover new knowledge, and make informed decisions. Research assists us in addressing some of society's most critical matters, such as improving public health and developing sustainable energy resources.

The COVID-19 pandemic has recently highlighted the critical role of research in our lives.

Researchers from all over the world have worked extremely hard to better understand the virus, develop effective treatments, and develop effective vaccines.

The rapid development of COVID-19 vaccines demonstrates the importance of research in addressing public health issues. Without Research, we would not have been able to develop such effective tools to combat the pandemic.

Additionally, research helps individuals make informed decisions about their own lives.

For examples:

Medical Research can help people make choices about their health, such as whether to adopt a particular diet or engage in certain activities that can reduce the risk of developing certain illnesses. Scientific research also plays a crucial role in shaping public policy, from environmental regulations to public health measures.

In Summary, research is essential to our lives because it allows us to gain knowledge, address societal challenges, and make informed decisions. The COVID-19 pandemic is a vivid illustration of the importance of research in addressing urgent public health issues.

2a) Discuss the objectives of Research.

The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet. Though each research study has its own specific purpose, we may think of research objectives as falling into a number of following broad groupings.

- 1) To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as exploratory or

formulative research studies)

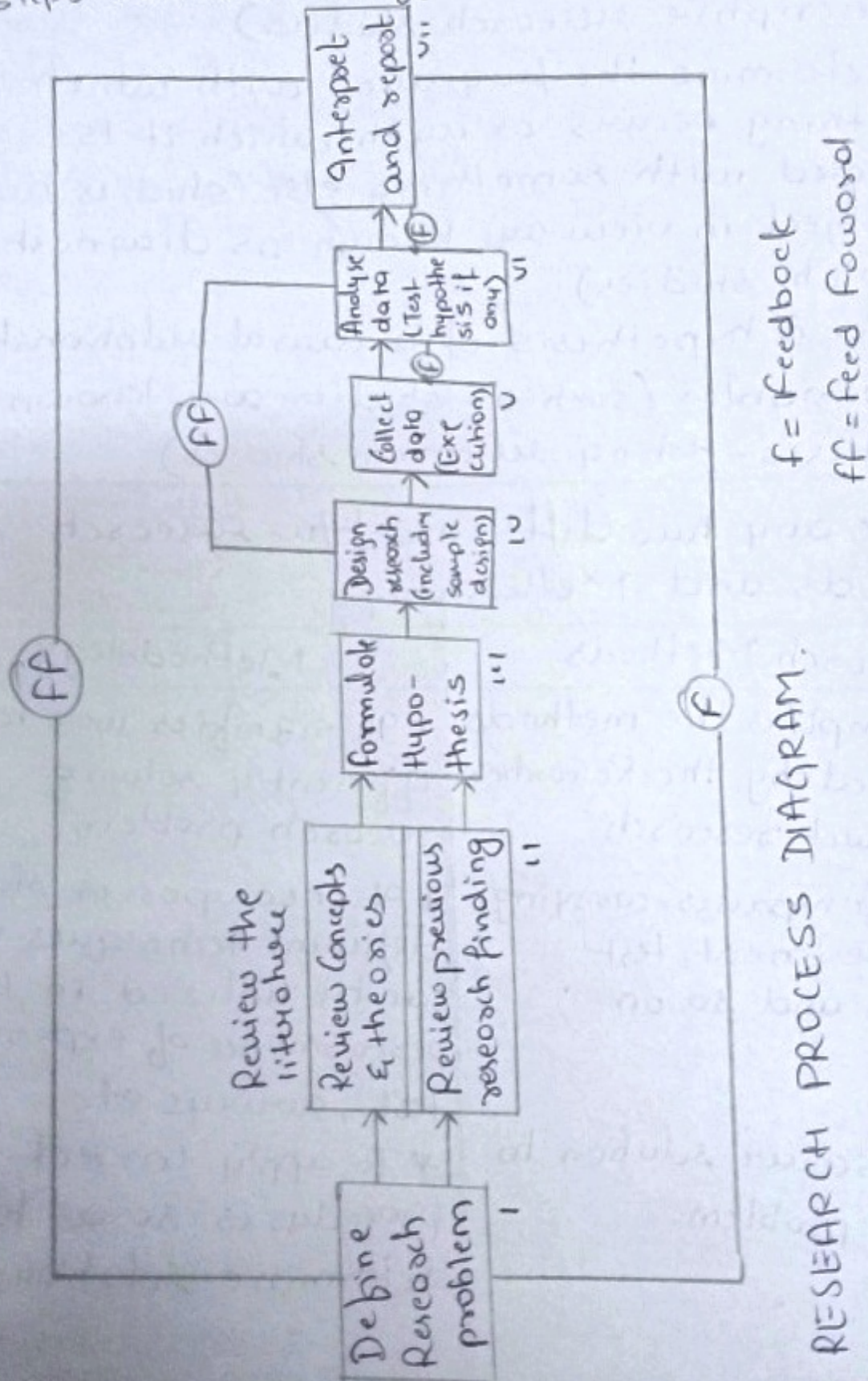
- 2) To portray accurately the characteristics of a particular individual, situation or a group (studies with this object in view are known as descriptive research studies)
- 3) To determine the frequency with which something occurs or with which it is associated with something else (studies with this object in view are known as diagnostic research studies)
- 4) To test a hypothesis of a causal relationship b/w variables (such studies are known as hypothesis-testing research studies)

2b) Write any two difference b/w research methods and Methodology.

Research Methods	Methodology
<ul style="list-style-type: none">* It implies the methods employed by the Researcher to conduct research* It encompasses carrying out experiment, test surveys and so on* To discover solution to research problem.	<ul style="list-style-type: none">* It signifies way to efficiently solving research problem.* It encompasses study different techniques which can be utilized in the performance of experiment, test, surveys etc,* To apply correct procedures so as to determine solutions.

3) With neat diagram, explain research process steps in detail with respect to your identified problem.

Research process consists of series of action or steps necessary to effectively carry out research.



RESEARCH PROCESS DIAGRAM.

The following steps are included in Research process are:-

1) Formulating Research problem.

eventually two steps are involved in formulating the research problem, viz., understanding the problem thoroughly, and rephrasing the same into meaningful terms from an analytical point of view. Initially the problem may be stated in a broad general way & then the ambiguities.

2) Extensive literature survey:-

Once the problem is formulated, a brief summary of it should be written down. It is compulsory for a research worker writing a thesis for a Ph.D. For this purpose, the abstracting and indexing journals and published or unpublished bibliographies are the first place to go to. In this process, it should be remembered that one source will lead to another.

3) Development of working hypothesis.

After extensive literature survey, researcher should state in clear terms the working hypothesis or hypotheses.

4) Preparing the research design:-

The researcher will have to state the conceptual structure within which research would be conducted. There are several research designs, such as experimental & non experimental hypothesis testing.

5) Determining sample design

The researcher must decide the way of selecting a sample or what is popularly known as sample Design. There are several different types of sampling design. We should choose according to our Research

6) Collecting the data.

There are several ways of collecting the appropriate

data which differ considerably in context of money costs, time and other resources at the disposal of the researcher.

Data can be collected by any one or more of following steps:

- By observation → Through schedules
- Through personal interview
- Through Telephone interview
- By mailing of questionnaires

7) Execution of the project.

It is a very important step in the research process. If the execution of the project proceeds on correct lines, the data to be collected would be adequate and dependable.

8) Analysis of data.

Analysis of data requires a number of closely related operations such as establishment of categories, the application of these categories to raw data through coding, tabulation & then drawing statistical inferences.

9) Hypothesis testing.

After analysing the data as stated above, the researcher is in a position to test the hypotheses, if any, he had formulated earlier.

10) Generalisation and Interpretation:-

If a hypothesis is tested & upheld several times, it may be possible for the researcher to arrive at the real value of research lies in its ability to arrive at certain generalisations.

11) Preparation of the Report or the thesis:-

Finally the researcher has to prepare the report of

what has done by him/her. Writing of report must be done with great care ~~keeping in view~~ ~~the~~ ~~to~~ 9

4 a) Ex post facto research.

An Social science and business research we quite often use the term Ex post facto research for descriptive research studies. The main characteristic of this method is that the researcher has no control over the variables; he can only report what has happened or what is happening. Most ex post facto research projects are used for descriptive studies in which the research seeks to measure such items as, for example, frequency of shopping, preferences of people or similar data.

Ex post facto studies also include attempts by researchers to discover causes even when they cannot control the variables. The methods of research utilized in descriptive research are survey methods of all kinds, including comparative and correlational methods.

4 b) Essentials of a good questionnaire.

A Good questionnaire is an essential tool for gathering data from a sample of respondents. Here are some of the essential element of a good questionnaire.

- * clarity and simplicity:- A good questionnaire should be written in clear and simple language that is easy for respondents to understand.

- * Relevant questions: The questionnaire should contain

questions that are relevant to the research or the objectives of the study. The questions should be designed to collect info that is necessary to achieve the research objectives.

* **Structured question.**
Question should be well structured and ordered in a logical sequence. This makes it easier for respondents to understand the flow of the questionnaire & to provide accurate answers.

* **Neutral and unbiased questions**
The questions should be neutral & unbiased. This means that they should not be written in a way that influence the responses of the respondents.

* **Validity and Reliability**
The questions should be tested for validity and reliability. This involves ensuring that the questions are measuring what they are intended to measure and that they consistently produce the same results when used with different respondents.

* **Length:**
The questionnaire should not be too long.

In summary, good questionnaire is essential for collecting reliable and valid data in RM & IPR.

5a) Differentiate the following types of Research.

Quantitative	Qualitative
It is the method used to generate numerical	A method for developing a better understanding of

data by using a lot of techniques such as logical, statistical & mathematical techniques.

- * It employs an objective approach
- * Data collection methods are experiments, surveys and observation expressed in numbers.
- * This method not involve a process-oriented inquiry
- * It is a conclusive research method

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human & social sciences in understanding human behaviour & personalities.

- * It employs a subjective approach
- * Data collection methods involved are interview, focus groups, literature review, ethnography.
- * This method involves a process oriented inquiry.
- It is one of the exploratory research methods

Conceptual

- * It is more focused on exploring theoretical frameworks
- * It includes literature review, theoretical analysis & philosophical explorations
- * It involves

* In this researcher tries to understand the concept or idea in broader context without necessarily conducting experiments

Empirical

- * It is more focused on collecting and analysing data through observation and experimentations to test hypothesis & theory
- * Examples: Research include experiments, surveys, case studies & observational studies
- * It is based on direct or indirect observations & experimentations and it is aimed at discovering or verifying the relationships b/w variables

* Scientific theories that organize the data are conceptual

* Scientific experiments and observations give rise to 12 empirical data.