

"Assignment"
"Final Paper"

MS(EE)

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Subject :- Research Methodology

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Q1: a

Steps involved in Research process :-

- ① Formulating a research problem.
 - Ⓐ Reviewing the literature
 - Ⓑ Decide what you want to find out?
 - Ⓒ Identifying variables
 - Ⓓ Constructing hypothesis
- ② Conceptualizing the research design.
- ③ Constructing an instrument for data collection.
- ④ Selecting a sample.
- ⑤ Writing a Research proposal.
- ⑥ Collecting Data.
- ⑦ processing Data.
- ⑧ Writing a Research Report.

P.T.O

Q1

②

① :- Steps involved in Formulating of a Research Problem :-

① Identify the broad field or subject area of interest to you:

→ A Research always starts with identifying a broad Research area depending on interest, knowledge, speciality, expertise & profession.

you should first select major area you want to investigate. which may have a wide significance.

② Discuss the broad area into sub areas:

→ once you select a broad area you need to narrow down into specific topics which have to be researchable and manageable.

③ Select what is of most interest to you:-

→ Select one area in which your interest is more and is more feasible and manageable for you. which should be relevant to your subject.

④ Raise Research questions:-

→ After selecting start thinking about what should you explore about this topic. Raise important

Questions which need to be answer in your

Research. Choose most relevant and important

Question. which will determine length of your Research.

⑤ Formulating the objective:-

you should formulate the objective that you intend to explore. The objective basically stem out the Research Questions. Objective Question are aim-oriented questions, consisting of words such as, to explore, to investigate, to examine etc.

⑥ Assess your objective:- (Feasibility in term of time Resources, data availability (etc))

⑦ Double check:- (go back and give final consideration), Review the Research properly and go back for another consideration to finalize it.

Q2:- @

It includes the following steps:-

- ① operationalizing variables so that they can be measured.
- ② selecting a sample of interest to study.
- ③ collecting data to be used as a basis of testing hypothesis.
- ④ Analyzing the Result.

P.T.O

Q2: (b) Differentiate b/w Qualitative & Quantitative

① Qualitative method of Research:-

- ① Ethnography.
- ② Case of Study.
- ③ Survey / Sampling.
- ④ Focus groups.
- ⑤ Discourse / Text Analysis.
- ⑥ Quantitative Description.
- ⑦ Prediction / Classification
- ⑧ Narrative
- ⑨ grounded Theory.

It is the primary exploratory research, to gain understanding.

② Quantitative Methods of Research:-

- ① True Experiment.
- ② Quasi-Experiment.
- ③ Meta Analysis.
- ④ objective measurements
- ⑤ Statistical, Mathematical or numerical analysis.

It is used to Quantify the problem by way of gathering numerical data.



P.T.O

Q3:

(5)

Study Design Based on Nature of Investigation:-

The Study Design can be selected on the base of:

① Experimental: If a Relationship is studied by starting from the cause of establish the effects, it is called experimental Study.

→ The independent variables can be observed, introduced, manipulated, or controlled by the Researcher or someone else.

② Non experimental: If a Study focuses on starting from the effects to trace the cause, it is classified as a non-experimental Study.

→ variables can not be introduced/manipulated etc. As the assumed case has already occurred. Instead, the Researcher retrospectively links the cause to the outcome.

③ Quasi or Semi-experimental:

→ A mixture of traits of Both experimental and non-experimental Study Design.

END