#### P16MBA12: CC-XII RESEARCH METHODS IN MANAGEMENTDECISIONS

Class: MBA

### Subject: P16MBA12: CC-XII RESEARCH METHODS IN MANAGEMENTDECISIONS

Semester: II UNIT – I

#### 1) Define Research?

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic research for pertinent information on a specific topic. In fact, research is an art of scientific investigation. Research is a careful investigation or inquiry especially through search for new facts in any branch of knowledge.

According to Fred Ker linger,"Research is an organized enquiry designed and carried out to provide information for solving a problem".

# 2) What do you mean by analytical research?

Analytical research described and interprets the past or recent past from selected sources. The sources may be documents preserved in collection, and/or participants, oral testimonies (oral histories). The various characteristics of analytical research are as follows:

- ✓ Context bound generalizations.
- ✓ A discovery orientation.
- ✓ Emergent case study design.
- ✓ Holistic emphasis (qualities of parts unifies the whole phenomenon).
- ✓ Non interference in the natural setting and

Inductive data analysis.

3) Discuss various approaches of exploratory study.

The following are the three approaches to the exploratory study:

- ✓ Survey of Literature: A review of the literature helps to identify the hypotheses which may serve as a guide for further investigation.
- ✓ Experience survey: A small portion of existing knowledge and experience is put into written form. Everyday experience provides opportunity to obtain information required to formulate hypothesis.
- ✓ Case study: The focus may be on individual or situations or group or communities. The method of study may lay stress on the examination of the existing records.

#### 4) Discuss nature of research.

Nature of research includes:

- ✓ Objectivity: It is objective and logical, applying possible tests to validate the measuring tools and the conclusions reached.
- ✓ Observable or Empirical : It is based upon observable experience or empirical evidence.
- ✓ Solution seeking: Research is directed towards finding answers to pertinent questions and solutions to problems.

#### 5) Define business research.

Business research is a systematic and objective process of gathering, recording and analyzing data for decision making. The research must be systematic, not haphazard. It must be objective, avoid the distorting effects of personal bias. The aim of applied research is to facilitate managerial decision making. On the other hand, basic or pure

research is used to test and build specific theories and concepts. According to Zikmund, "Business research is a managerial tool that companies use to reduce uncertainty. It is a manager's source of information about organizational and environment conditions, and covers topics ranging from long range planning to the most ephemeral tactical decisions".

6) Discuss in brief the term focus groups.

Focus groups originate from sociology studies. They have been extensively used in marketing research. Focus groups studies are generally conducted to evaluate the potential of a new product idea or concept. A focus group comprises several persons, who are led by a trained moderator. The moderator's task is to lead the team in generating and exchanging ideas on a particular issue. The process starts by issuing a topic for discussion among participants by the moderator. In such discussion, the moderator's role will be to silently watch the proceeding and ensure that the discussion is going on as expected.

7) Elaborate qualitative approach of research.

It is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is a function of researcher's insights and impressions. Such an approach to research generates result either in non – quantitative form or in the form, which are not subjected to rigorous quantitative analysis. Generally, the techniques of focus group interviews, projective techniques and depth interviews are used.

8) What is case study?

The third general type of exploratory research is the case method. This research method has long been considered "soft" or nonscientific, but with the modern surge in qualitative research the case method has received more attention. Indeed the case method might be considered one variation of the survey of individuals with ideas. It involves the comprehensive study of one or a few specific situations and lends itself particularly to the study of complex situations in which the interrelations of several individuals are important.

9) Enlist Four significance of research.

Significance of research is as follows:

- ✓ Solving operational and planning problems.
- ✓ Increasing role of research.
- ✓ Research inculcates scientific thinking.
- ✓ Research provides the bias for nearly all Government policies in economic system.

### 10) What is cohort study?

It is similar to the panel study, But rather than observing the exact same people, a category of people who share a similar life experience in a specified time period is studied. Cohort analysis is "explicitly macro analysis", Which means researchers examine the category as a whole for important features. In cohort study, the individuals examined over time may not be the same but they should be representative of a particular group (or cohort) of individuals who have shared a common for time interval of data collection (the cohort interval), for example age group such as 15-20 years,21-25 years etc.......

11) Enumerate purpose of literature review.

The reason for review of related literature are:

- ✓ To gain a background knowledge for research of the research topic.
- ✓ To identify the concepts relating to it, potential relationship between them and to formulate researchable hypothesis.

- ✓ To identify appropriate methodology, research design, method, of measuring concepts and techniques of analysis.
- ✓ To identify the data source used by other researchers.
- ✓ To learn how others structured their reports.

### 12) Write short notes on research hypotheses.

A hypotheses is a logical supposition, a reasonable guess, an education conjecture or a proposed answer to the posed research problems or observed phenomenon or phenomena to be researched and which may give direction to thinking and therefore aid in solving it. Hypotheses indicate where to search for data and how to interrelate this information. The solution of the research problem is commenced by collecting data after starting the hypotheses. Data as such does not present a solution to the problem, but merely confront the researcher who has a hypotheses to test. The data and the interrelationships between the data, representing a coherent description or explanation of situation or event that have led to the problem are specified by the hypotheses.

# 13) What is null hypotheses?

Tests are hypotheses always begin with an assumption or hypotheses (i.e.., assumed value of a population parameter). This is called Null hypotheses. The null hypotheses asserts that there is no (significant) difference between the sample statistics and the population parameter and whatever the observed difference is there, is merely due to fluctuation in sampling from the same population. Null hypotheses is usually denoted by the symbol Ho. R.A.Fisher defined null hypotheses as "The hypotheses which is tested for possible rejection under the assumption that it is true". In other words, the hypotheses (regarding some characteristic of population) which is to be verified with the help of a random sample or the hypotheses which is under test is called null hypotheses.

# 14) Describe Empirical research.

Empirical means based upon observation or measurement rather than theoretical reasoning. It supports the development of new ideas through the collection of data. Thus a research who develops a theory of sport fan violence through visiting a library and developing their own explanation through reading existing work will be undertaking theoretical research. The researcher who takes this one step further and collects data to tests their explanation will be undertaking empirical research. For example, computer simulation generates scores form random number routines. Cases and measure are not involved. Analytical researcher use mathematical operations to work from initial assumption to conclusion. There are no cases, measures, or scores.

# 15) What is research design?

A research design is simply the framework or plan for a study that is used as a guide in collecting and analyzing the data. It is blueprint that is followed in completing a study.

According to Green and Tull, "A research design is the specification of methods and procedures for acquiring the information needed. It is the full over all operational pattern or framework of the project that stipulates what information is to be collected from which sources by what procedures".

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

### 16) Define exploratory research.

Exploratory research is a type of research conducted for a problem that has not been clearly defined. Exploratory research studies are also termed as formulative research studies. Exploratory research helps determine the best research design, data collection method and selection of subjects. Exploratory research focuses on why questions. Exploratory research provides insights into and comprehensive of an issue or situation. It should drawn definite conclusion only with extreme caution. Expolratory research is a type of research conducted because a problem has not clearly defined.

# 17) Define conclusive research.

Conclusive research provides information, which helps the executive to make a rational decision. The marketing executive has to arrive at a suitable decision from the various alternative decisions. The various alternatives conclusive and selecting the most suitable conclusion may be done by descriptive research design or experimental research design. In descriptive research design, only a partial situation is clarified, but in the case of experimental research design a precise alternative is selected.

#### 18) What is replication principle of Experimentation?

This principle of an experiment design is replication: which is a replication of the basic experiment. In other words, it is a complete run for all the treatments to be tested in the experiment. In all experiments, some variation is introduced because of the fact that the experimental units such as individual or plots of land in agricultural experiments cannot be physically identical. This type of variation can be removed by using a number of experimental units. Researchers therefore perform the experiment more than once i.e., they repeat the basic experiments.

## 19) Elaborate Panel Design.

A permanent set of experiment units used in marketing research investigation is known as "panel". Panel can be used both for exploratory and conclusive research. In such experiment observation are recorded at some pre-determined intervals of time and experiment variables can be introduced if and when desired. Here any two set of

successive measurements between which some experiment variable introduced can be considered as before and after experimental measurement.

### 20) What is internal validity?

Internal validity is the measure of accuracy of an experiment. It measures whether the manipulation of the independent variables or treatments, actually caused the effects on the dependent variables. Thus, internal validity examines whether the observed effects on the test units could have been caused by variables other than the treatment. If the observed effects are influenced or confounded extraneous variable it is difficult to draw valid inferences about the causal relationship between the independent and dependent variable. Internal validity is the basic minimum that must be present in an experiment before any conclusion about treatment effects can be made. Without internal validity the experimental results are confounded. Control of extraneous variable is a necessary condition for establishing internal validity.

### 21) Define the term measurement.

Measurement is the process of observing and recording the observation that are collected as part of a research effort. Technically speaking, measurement is a process of mapping aspects of a domain onto other aspects of a range according to some rule of correspondence.

According to Blalock, "Measurement is the systematic assignment of number to a set of observation to reflects the status of each member of the set in terms of the various properties".

## 22) What is scaling?

Scaling may be considered as an extension of measurement. Scaling involves creating a continuum upon which measurement objects are located. Scaling describes the procedures of assigning numbers to various degrees of opinion, attitude and other concepts. This can be done in two ways:

- ✓ Making a judgment about some characteristics of an individual and then placing him directly on a scale that has been defined in terms of that characteristics and
- ✓ Constructing questionnaires in such a way that the score of individual responses assigns him a place on a scale.

#### 23) Explain Nominal scale.

Nominal scale represents the most elementary level of measurement. A nominal scale against a value to an object for identification or classification purposes. The value can be but does not have to be a number because no quantities are being represented. In this sense a nominal is truly a quantities are being represented. In this sense a nominal scale is truly a qualitative scale. Nominal scales are extremely useful even thought they can be considered elementary. Marketing research use nominal scales quite often.

# 24) What do you mean by Guttmann scale?

It is based on the idea that items can be arranged along a continuum in such a way that a person who agrees with an item or finds an item acceptable will also agree with or find acceptable with all other items expressing a less extreme position. For e.g.: Children should not be allowed to watch indecent programmers or Government should ban those programmers or they are not allowed to air on the television. They all are related to one aspect.

# 25) Explain Staple's scale.

The staples scale was originally developed in the 1950's to measure simultaneously the direction and intensity of an attitude. Modern version of the scale with a single adjective. The modified staple scale places a single adjective in the center of an even number of numerical values(ranging, perhaps, from +3 to -3). The scale measures how close to tor distant from the adjective given stimulated is perceived to be.

# 26) Write short notes on Ranking scale.

In ranking scales, the subject directly compares two or more objects and makes choices among them. Frequently, the respondent is asked to elect one as the "best" or the "most preferred". When there are only two choices, this approach is satisfactory, but it often results in "ties" when more than two choices are found. There are two approaches of ranking scales:

- ✓ Method of paired comparison.
- ✓ Method of rank order.

#### 27) What is Reliability of Instrument?

It is considered that, when the outcome of a measuring process is reproducible, then the measuring instrument is reliable. Reliable measuring scales provide staple measures at different times under different conditions. For e.g.: if a coffee vending machine gives the same quantity of coffee every time, then it can be concluded that the measurement of the coffee vending machine is reliable.

Thus reliability can be defined as the degree to which the measurement of a particular instrument are free from errors and as a result produce consistent result produce consistent results.

### 28) Discuss scaling Degree of subjectivity.

With this basic the scale data may be based on whether we measure subjective personal preferences or simply make non preferences judgment. In the former case the respondent is asked to choose which person he favors or which solution he would like to see employed, whereas in the later case it is simply asked to judge which person is more effective in some aspects or which solution will take fewer resources without reflecting any personal preferences.

### 29) Explain data collection.

Data collection is a term used to describe a process of preparing and collecting data. For e.g.: as part of a process improvement or similar project. The purpose of data collection is to obtain to keep on record to make decision about important issues to pass information on other. Primary data are collected to provide information regarding a specific topic .Data collection is an important aspects of any type of research study. Inaccurate data collection can impact the result of a study and ultimately lead to invalid result it is a method for impact evaluation vary among a continuum.

### 30) Define secondary data.

Secondary data are those data which have been already collected and analyzed by some earlier agency for its own use: and later the same data are used by a different agency. According to W.A.Neiswanger," A primary source is a publication, Reporting the data which have been gathered by other authorities and for which others authorities and for which others are responsible".

### 31) Write short note on suitability of data?

The data that are suitable for one enquiry may not necessarily be found suitable in another enquiry. Hence, if the available data are found to be unsuitable, they should not be used by the researcher must very carefully scrutinize the definition of various terms and units of collection used at a time of collecting the data from the primary sources originally. Similarly the object scope and nature of the original enquiry must also be studies.

#### 32) What are the disadvantages of secondary data?

Disadvantages of secondary data are as follows:

- ✓ Relevance: The data may not fit into the needs of investigation. There may be different in the units of measurement: there may be surrogated data, discrepancy of classes and data may pertain to some other period of time.
- ✓ Accuracy: It is observed that it is rather difficult to measure the degree of approximation used in the collection of information as well as the competences of the investigation in motivating the persons to supply the desired information.
- ✓ Existences of obsolete information: Information may be outdated or obsolete.

### 33) Elaborate primary data.

Primary data is one which is collected by the investigator himself for the purpose of a specific inquiry or study. Such data is original in character and is generated by survey conducted by individual or research institutions or any organization. The objective of primary data are formulated on the basis of research objectives. Objectives set the guidelines and directions of research planning. Formulating the objective offers the best feasible means of solution.

34) Define questionnaire method of data collection.

A questionnaire is a method of obtaining specific information about a defined problem so that the data after analysis and interpretation results in a better appreciation of the problem. A questionnaires form, which has to be completed by an interviewer, is often referred as schedule. The success of collecting data either through the questionnaires method or through the schedule method depends largely on the proper design of the questionnaire.

### 35) What are limitations of the schedule method?

Limitations of schedule method are as follows:

- ✓ Costly and Time-consuming: This method is costly and time consuming due to its basic requirement of interviewing the respondent.
- ✓ Need of trained field workers: The schedule method requires involvement of well trained and experienced field workers.
- ✓ Adverse effect of personal presence: Sometimes personal presence of enumerator becomes an inhibiting factor.
- ✓ Organizational difficulties: If the field of research is dispersed, it becomes difficult to organize it.

# 36) What are the procedures of focus group survey?

Procedures of focus group survey include:

- ✓ Determine the objective of the marketing research project and define the problem.
- ✓ Specify the objective of qualitative research.
- ✓ State the objectives are questions to be answered by focus group.
- ✓ Write a screeningquestionnaires.
- ✓ Develop a moderator's outline.
- ✓ Conduct the focus group interview
- ✓ Review tapes and analyze data.
- ✓ Summarizes the finding and plan follow up research.

### 37) Discuss Panel Interview.

A panel interview may be composed of either individual or corporate units. It is a convenient method of obtaining information about the continuing behavior of a group or panel of respondents. The very nature of the panel interview is that the group comprising the panel member is interviewed on the same or similar topics at regular intervals over a reasonable period of time. Since the data are obtained for a fixed panel or group over a successive period, the basic is provided for determining trends and changes over a length

of time. The panel interview is not greatly different from setting up any other type of sampling operation.

#### 38) Write short notes on observation method.

Observation is an activity of a person which senses and assimilation the knowledge of the phenomenon or the recording of data using instrument. It can be also referred as datum collected during this activity. The observation method is most commonly used method especially in studies relating to behavioral sciences. In a way we all observe things around us, but his sort of observation is not scientific observation. Observation became a scientific tool and the method of data collection for the researcher, When it serves a formulated research purposes, it is systematically planned and recorded and is subjected to checks and control on validity and reliability.

### 39) What do you mean by content analysis?

Content analysis consists of analyzing the content of documentary materials such as books, magazines, newspapers and the contents of all other verbal materials, which can be either spoken or printed. The analysis of content is a central activity whenever one is concerned with the study of the nature of the verbal materials. A review of research in any area for instance involves the analysis of the content of research articles that have been published.

### 40) What do you mean by sampling?

Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which a judgment or interference about the aggregate or totality is made. In other words it is the process of obtaining information about an entire population by examining only a part of it. In most of the research work and survey, the usual approach happens to be to make generalization or to draw inferences based on samples about the parameters of population form which the samples are taken. Population is the aggregate or totality of statistical data forming a subject of investigation.

### 41) What are Prerequisites of sampling?

The essentials that a sample must possess are:

- ✓ Representation: A sample must represent the proper universe otherwise it must interpret a wring result. For the purpose a sample method is used.
- ✓ Adequacy: The size of the sample used must be adequate.
- ✓ Independence: Every item of the sample must be independent so that each get same chance of being of selected.
- ✓ Homogeneity: The sample must give the more or less the same unit if the sample are taken from the same universe.

#### 42) What is Quota sampling?

One of the most commonly used non-probability sample design is quota sampling, Which enjoys its most widespread use in consumer survey. Ti sampling method also uses the

principle of stratification. As in stratified random sampling the researcher begins by constructing strata. Bases for stratification in consumer surveys are commonly demographic. E.g.: age, sex, income and so on....

# 43) How is sample size determined?

Determining sample size is a very important issue because samples that are too large may waste time, resources and money, while samples that are too small may lead to inaccurate results. When a survey is undertaken and when it is not possible to cover the entire population the marketing researcher has to answer a basic question. How large should the sample be? The sample size decision is related directly to research cost, and therefore must be justified. The researcher while deciding the appropriate size must be scientifically made and should not be done arbitrarily because of the risks involved. The sample size should be neither too large nor too small.

# 44) What is editing?

The customer first step in analysis is to edit the raw data. Editing detects errors and omission corrects them when possible and certifies that maximum data quality standards are achieved. Alternately, recorded raw data is normally less than perfect and the first phase through which this data must pass is editing. The editor's purpose is to guarantee that data are:

- ✓ Accurate.
- ✓ Consistent with the intent of the question and other information in the survey.
- ✓ Uniformly entered.
- ✓ Complete.
- ✓ Arranged to simply coding and tabulation.

## 45) What are different types of editing?

Types of Editing are as follows:

- ✓ Manual Editing: Here the editor scans the whole data and amends it in accordance with the given instructions. Here the drafted instructions are of great significance and helps the editor to perform his work systematically with little scope of using his own judgment and institution.
- ✓ Mechanical Editing: When data are transformed on punch cards then counter sorter can be used for editing the raw data. It provides exhaustive and through logical checking.
- ✓ Computer Editing: It is similar to mechanical editing with the difference that several hundred editing instructions can be executed at one time on a computer.

# 46) Give uses of Editing.

Uses of Editing are as follows:

- ✓ It eliminates errors or points of confusion in raw data.
- ✓ Can help in evaluating the performance of field force.
- ✓ Provides guidelines to make improvement in the future field work.
- ✓ Serves as the basic for coding, classification and tabulation.
- ✓ Generates proper level of confidence in the data itself.
- ✓ Tries to prevent more obvious idiocies appearing in the final output.

## 47) Define coding of data.

Coding is the procedure of classifying the answers to a question into meaningful categories. The symbol used to indicate these categories are called codes. Coding refers to the process of assigning numerals or other symbols to answers so that responses can be put into a limited number of categories or classes. Such classes should be appropriate to the research problem under consideration. They must also posses the characteristics of only one cell in a given category set. Another rule to be observed is that of unit – dimensionality by which is meant that every class Is defined in terms of only one concept.

### 48) Define Syntactical.

These units can be words, phrases, sentences, or paragraphs: words are the smallest and most reliable data units to analyze. While we can certainly count these units, we are more interested in the meaning their use reveals. In content analysis we must determine the words that are most commonly used to describe product.

# 49) What is Data entry?

It converts information gathered by secondary or primary methods to a manipulation. Keyboarding remains a mainstay for researchers who needs to create a data file immediately and store it in a minimal space on a variety of media. However, researchers have profited from more efficient ways of spending up the research process especially from bar coding and optical character and mark recognition.

# 50) Explain Data analysis.

Data analysis is a process of gathering modeling and transforming data with the goal of highlighting useful information, suggesting conclusion and supporting decision making. Data analysis has multiple facts and approaches encompassing diverse technologies under a variety of names, in different business, science and social science domains. Hence appropriate analytical tools must be used. The most elementary is the arithmetic analysis using percentile and ratios. Statistical analysis like mean, median mode, percentage, standard deviation, and coefficient of correlation should be used whenever applicable. Advanced statistical tools like test of significance, factor analysis multiple discriminates analysis and regression analysis may also be used.

### 51) Describe Qualitative analysis.

Qualitative analysis transforms data into findings. No formula exists for that transformation. They just provide guidance. Direction can and will be offered final destination remains unique for reach inquirer known only when and if arrived at. Qualitative data analysis is an iterative and reflexive process that begins as data are being collected rather than after data collection has ceased. Next to the field note or interview transcript, the qualitative analyst jots down ideas about the meaning of the text and how it might relate to other issues. This process of reading through data and interpreting it continue throughout the project and the analyst adjust the data collection process itself when it begins to appear that additional concepts need to be investigated or new relationships explored.

#### 52) What do you mean by scenes?

Scenes mean lack of symmetry and asymmetry of distribution of a random variable. Scenes gives an idea about the shape of the curve which can draw with the help of the given data. The scenes ratio is the value of the scenes statistics divided by its standard errors. This measure is useful for determining the extent of skew. According to Croton and Cowden," When a series is not symmetrical it is said to be asymmetrical or skewed." The scenes statistics is a measure of the shape of a distribution. It is negative when the distribution is negatively skewed, zero when the distribution is negatively skewed, and positive when the distribution is positively skewed. Its calculation is based on the cubed deviation from the mean.

### 53) What is Time series Analysis?

An arrangement of statistical data in accordance with time of occurrence or in a chronological order is called time series. The numerical data which we get at different [point of time the set of observation is known as Time series. The basic assumption is that changes witnessed over time in a sample group will be extrapolated to population. According to Morris Hamburg, "A time series is a set of observation arranged in chronological order".

### 54) What do mean by discriminate analysis techniques?

Discriminate analysis techniques are described by the number of categories possessed by the criterion variable. When the criterion variable has two categories, the techniques is known as two group discriminate analysis. When three or more categories are involved the techniques is known as multiple discriminate analysis. A discriminate analysis enables the researcher to classify persons or objects into two or more categories.

### 55) What Is MANOVA?

Multivariate analysis of variance(MANOVA) is simply an extension of the univariate analysis of variance. In analysis of variance, we examine the one metric dependent variable with the grouping independent variable. Analysis of variance fails to compare the group when the dependent variable becomes more than one dependent metric variable. To account for multiple dependent variables, MANOVA bundles them together into a weighted linear combination or composite variable.

### 56) Write short note on Cluster Analysis?

Cluster analysis is used to classify persons or objects into a small number of mutually exclusive and exhaustive groups. There should be high internal (within-cluster) homogeneity and high external (between-cluster) heterogeneity. In marketing research, cluster analysis has been increasingly used because of this utility in resolving the problem of classifying consumers, products, etc... Market segmentation usually is based not on one factor but on multiple factors. Each variable represents its own cluster.

#### 57) Write short note on Multi dimensional scaling.

Multi-Dimensional scaling (MDS) in a class of procedures for representing perceptions and preferences of respondents spatially by means of a visual display. Perceived or psychological relationship among stimuli are represented as geometric relationship among points in a multi-dimensional space. These geometric representation are often

called spatial maps. The axes of the spatial maps are assumed to denote the psychological bases or underlying dimensions respondents use to form perceptions and preferences for stimuli.

# 58) Define research report.

Research report is the process of communicating the results of an investigation. It is a document which reflects about the research conducted and the care that has been exercised thoroughly the study.

According to Lancaster, "A report is a statement of collected and consisted facts so drawn up as to give clear and concise information to persons who are not already in possession of the full facts of the subject matter of the report"

# 59) Give two characteristics of research report.

Characteristics of research report are as follows:

- ✓ Accuracy: Information presented in reports should be accurate. Inaccurate information may often land the managers in trouble.
- ✓ Simplicity: A report should be simple. This would help in arriving at decisions quickly and easily.
- ✓ Completeness: The report should be complete in all respects. There should be no room ambiguity.

# 60) Discuss Algorithmic Research report.

There are problems (i.e.) production, scheduling, JIT, supply chain management, line balancing, layout design, portfolio management, etc... exists in reality. The solution for each of the above problems can be obtained through algorithms. So the researchers should come out with newer algorithms or improved algorithms for such problems. For a combinatorial problem, the researcher should attempt to develop an efficient heuristic.

The algorithm research report can be classified into the following categories:

- ✓ Algorithmic research report for combination problem.
- ✓ Exact algorithm research report for polynomial problems.

# 61) What are the significance of report writing?

Significance of report writing is as follows:

- ✓ Provide details: It is the research report gives other details of research.
- ✓ Logical presentation: The purpose of research cannot be served unless it is presented properly.
- ✓ Reflects final research: Skill and care shall be taken to write a report because it is the final work of the research.

✓ Tool of evaluating researcher: It is the research report which discloses the scholarliness of the researcher.

### 62) Elaborate summary report.

A summary report is generally prepared for the consumption of the lay audience (i.e.) the general public. The preparation of this type of report is desirable for any study whose finding, are of general interest. It is written in non – technical, simple language with a liberal use of pictorial charts. Its size is so limited as to be suitable for publication in daily newspapers.

### 63) Explain popular report.

The popular report is one which gives emphasis on simplicity and attractiveness. The simplification should be sought through clear writing, minimization of technical, particularly mathematical, details and liberal use of charts and diagrams. Attractive layout along with large print many subheadings, even an occasional cartoon now and then is another character feature of the popular report.

### 64) Write short note on objectivity of research report.

Writers must at all times retain their objectivity. Often researcher will become so enamored of a study that they overlook their scientific role. This is a natural temptation since much marketing research is done within a sales environment. It is one thing to sell objective results and quite another to present results that have been slanted to make them salable. Writers do neither themselves nor this company any favors if they lose their objectivity.

#### 65) What is statement of objectives?

The specific objectives of the report need to be set forth clearly. The reader must know exactly what the report covers. If the particular project is part of a large problem, it is desirable to state the overall problem and the problem solution process. Sometimes it may even be wise to provide some background information on how the problem arose and what previous research work, if any has been carried out.

#### 66) What is Executive summary?

The executive summary provides the reader with an overview of the report's essential information. It is designed to be real by people who will not have time to read the whole report or are deciding if this is necessary; therefore in your executive summary you need to say as much as possible in the fewest words. The executive summary should briefly outline the subject matter, the background problem, and the scope of the investigation, the method of analysis, the important findings arguments and important issues rose in the discussion, the conclusion and recommendation.

### 67) List three precautions while writing Research report.

Precautions while writing Research report are as follows:

- ✓ Concise and complete: While determining the length of the report, one should keep in view the fact that it should be long enough to cover the subject but short enough to maintain interest.
- ✓ Maintain Interest: A research report should not if this can be avoided, be dull; it should be such as to sustain reader's interest.
- ✓ Objective layout: The layout of the repot should be well thought out and must be appropriate and in accordance with the objective of the research problem.

# 68) What is Final proof?

Final editing of the draft should be taken up after a gap of at least a day. This helps in identifying mistakes, if any, better and correcting the mistake. Final editing requires questions to be answered pertaining to the organization, contextual, and layout of the final report. This can be done a couple of times and looking at the report with different focus each time. The executive summary follows the final stage of editing. It Is helpful to put the draft away for a day before doing the final editing.

### 69) What is presentation consideration?

The final consideration in the report writing process is production. Reports can be typed, printed on an ink-jet, laser, color or other printer or sent out for typesetting. Most student and small research report are typed or produced on a computer printer. The presentation of the report conveys to the readers the professional approach used throughout the project. When reports are photocopied for more than one reader, make sure the copies are clean and have no black streaks or gray areas.

#### 70) What are the measures for achieving objectivity of research?

The following measures may contributes to some degree of objectivity in research:

- ✓ Patience and self-control
- ✓ Open-minded
- ✓ Use of standardized concepts
- ✓ Use of quantitative method
- ✓ Group research or co-operative research and
- ✓ Use of random sampling techniques.

### 71) Describe the principle of Beneficences in Ethics.

It is important that research not only does no harm but also potentially contributes to the well-being of others. At times this might place a researcher in a different position. What is beneficial to one group may not be to another. Part of the principle of beneficences is question of competence. People who are professionally trained by accredited and acknowledge institutions are much more likely to be competent at what they do. Thus the qualifications of researchers are of considerable importance.

# 72) Describe subjectivity in research.

Subjective refers to that the result is researcher – dependent. Different researchers may reach different conclusion based o the same interview. In contrast, when a survey respondent provides a commitment score on a quantitative scale, it is thought to be more objective because the number will be the same no matter what researcher is involved in the analysis. Subjectivity guides everything from the choice of topic that one studies, to formulating hypotheses to selecting methodologies and interpreting data. In quantitative methodology, the researcher is encouraged to reflect on the values and objective he brings to his research and how these affect the research project.

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