1. Illustrate the general components of philosophical methods. How are they related to the scientific method? Explain.

Philosophy is a way of looking at things and an attempt to gain knowledge and truth. Philosophy attempts to provide a framework in reason that can explain all questions and problems related to human life. Some philosophical features and methods include methodic doubt, which is being sceptical about a belief, Argument, which is about alternatives to a belief, and the dialect, which has criticism and different judgements about a situation. It is distinguished by the methods that philosophers follow in tackling philosophical questions. Philosophical method involves a commitment to reason and argument as a source of knowledge. A good argument is a clear, organized, sound statement, the reasons which cure the original doubts in a problem.

**Methodology process**: This is a systematic process of doubting and being skeptical about the understanding of one's beliefs. Systematic process attempts to provide a framework in reason that can explain all questions and problems related to human life. In this process arguments to support the solutions and dialectic, which is presenting the solution and arguments for criticism by others, and help them judge their own, are involved.

**Doubt and the sense of wonder**: Time and again, philosophical understanding begins with some simple doubts about accepted beliefs. Sometimes, the initial impulse to philosophize from the suspicion that we do not fully understand, and have not fully justified, even our most basic beliefs about the world. By Aristotle: "It was their wonder, astonishment that first led men to philosophize and still leads them."

**Formulate questions and problems**: This is to formulate our doubts in questions to be answered or problems to be solved. The higher is degree of clearity of the question or problem is stated, the easier it will be to identify critical issues, the assessment of which undergirds any genuine progress in coming to some sort of resolution. This means, the more clearly the question or problem is stated, the easier it is to identify critical issues.

**Enunciate a solution**: This constitutes an attempt to solve a philosophical problem, and to give a definition or analysis. Mostly, all the surrounding philosophical text is offered by way of hedging, explanation, and argument.

**Justify the solution**: The argument is a set of statements, one of which, the conclusion, it is said or implied, follows from the others which is called the premises. Arguments as bundles of reasons which are logically interconnected statements. The reasons are the premises, the claim they support is the conclusion; together they make an argument. Philosophers constantly demanding and offering arguments for different claims they make. Philosophical arguments are the justifications to the subject they refer to.

**Philosophical criticism**: Philosophical criticism makes much philosophizing a social endeavour. Definitions and explanations are offered, in solution to problems; argument is done for those solutions; and then other comments come along and, often, demolish those solutions, throw the argument into doubt again, and force us to come up with better solutions.

The scientific method or process is fundamental to the scientific investigation and acquisition of new knowledge based upon physical evidence. Science manages new assertions with theories, hypotheses and observations. If a prediction turns out correct, which are tested by experiments, the theory survives. It is used by researchers to support or disprove a theory. Iterations, recursions, interleavings, and orderings are the scientific method's essential elements of the following four steps.

2. Explain how a research report should be presented, making short descriptions of each sections of a research report.

The researchers have to communicate the results of their research in a systematic manner for disseminating the results of research. The researcher works upon to investigate a problem, and his report should be a straight forward document that clearly, precisely and effectively describes his efforts. Primarily, the research report consists of three parts-

• The preliminary,

• The text or the main body of the report,

• The reference material.

The preliminary consists of the following components.

• The title page

• Researcher’s declaration

• The certificate of the supervisor

• Preface including acknowledgements

• Table of contents

• List of tables, and figures

• Abstract or synopsis

• List of abbreviations.

**The title page**: The title summarizes the main idea or ideas of your study. A good title contains the fewest possible words needed to adequately describe the content and/or purpose of your research paper.

**Researchers Declaration**: In case the research is undertaken by a student in fulfilment of the requirement of a degree, the declaration is required.

**Researcher’s supervisor’s certificate**: The research supervisor has to certify that it was a record of independent research work done by the student.

**Preface including acknowledgements**: The reasons and relevance of a study needs be mentioned in the preface. Here, the researcher acknowledges the support of his guide, colleagues, assistants, or organisations in conducting the research.

**Table of Contents**: It is the list of the chapters and their sub-titles with page numbers. Indentation should be followed for each subtitles.

**List of Tables and figures**: Figures refer to map, drawings, graphs, charts, diagrams etc. The full titles of tables and figures, worded exactly as they appear in text, are presented with consecutive numbers and page locations.

**Abstract or synopsis**: This is the summary of the findings of the research work. It also states in brief the purpose and scope of the study and also the method used for the research work.

**Abbreviations**: List of such names are to be abbreviated which are appear too often in the report.

**Presenting the Problem of the Thesis** : This is the body of the Report. The text consists of:

Introduction, Design of Study, Main Body and Conclusions

**Introduction**: This mentions the for introduction of the theoretical background of the portion, its definition and formulation. It should create interest to the reader in the subject matter of research.

**Theoretical background of the topic**: This section summarises the theory or a conceptual frame work within which the problem has been investigated. The significance of the research carried out is mentioned here.

**Statement of the problem**: There is a need of clear statement of the nature of the problem with specific questions to be answered or hypothesis to be tested. The researcher has to point out why and how the problem under research was selected. The historical background, facts and significance are pointed out.

**Review literature**: This is to summarise the current status of research work already done in the research area sought. This provides the background of the present study. Agreement or disagreement in findings or gaps in existing knowledge should be included.

**Significance of the study**:

3. Answer any two of the following questions in about 250 words each:

a) Make clear the differences between Hegel and Marxian Dialectics.

If two identities have different viewpoints about the same subject, and establish the truth through reasoned arguments, it is a dialect. It is theory of knowledge or a method of understanding that explains any given phenomenon/process/object as a unity of opposites.

**Hegelian Dialects**: Hegel argues that "what is rational is real and what is real is rational." Hegel places the Universal or Absolute Spirit over the objective spirit. The beginning of history happens with the beginning of the primitive Spirit or Absolute Being. Through this spirit, the synthesis is produced, which results in an unending phenomenon, and the being is produced. The being evolves itself into consciousness about itself. The Being, which is the thesis, the non-being, which is the non-thesis, and the process of becoming which is the synthesis, together become the triad. The activity of building and of tearing itself apart, with the intention of rebuilding itself ad infinitum, is the life of being.

The important feature of being is rationality that confirms the development of being is a dialectic process with the series of phenomenon. In comparison to Aristotle, Hegel argued that the reality is not the same or identical, but continuously change. This process depends upon a fundamental triad: Idea (Logos), Nature, Spirit.

**Dialectics in Karl Marx**: Marxist dialectic is a form of Hegelian dialectic which applies to the study of historical materialism. Anything that exists outside the purview of a material movement would not classify as history in Marx’s account. It purports to be a reflection of the real world created by man.

The Marx principle says that the world was “knowable,” the human mind in effect stood at the apex of a rational order which interpreted the dynamism of forces associated with social change and rendered that change with the possibility of interpretation. Marx replaced the notion of unity within Hegelian dialectics with the idea of struggle.

b) Explain various tools of research.

Tool, as in research, are specific mechanism or strategy that researchers use to collect, manipulate or interpret data. The various tools would be:

**Libraries**: This could be the starting point for every research. The following will be very beneficial: Referring to the Card catalogue, Browsing through Indexes and abstracts, Consulting the Reference librarian, There are state libraries and university libraries which are quite rich in literature, and have good collections. International libraries, as well as archives are helpful.

**Computer and Software**: A great deal of research work is available over the internet, which could be accesses using computing devices or gadgets. Online journals, Online libraries are good resources for research.

There are certain softwares which do quick calculations for research purposes. Some software packages for qualitative searches are NVivo, Q-Method, WEFT. For quantitative research, some of the softwares used are: R, Tableau, Excel, XLSTAT, SAS and SPSS. Several of the real life situations could be simulated under controlled conditions using Computers and various softwares.

**Techniques of Measurement**: Measurement is limiting the data of any phenomenon- substantial or insubstantial, so that those data may be interpreted and compared to acceptable qualitative or quantitative standard. These could be done in the laboratories under controlled environments or in the field or marketplace. The techniques used for measurement if of vital importance for the result. Validity and reliability of measurement instrument needs to be tested.

**Statistics**: Statistical processing & analysis are to be done, especially in cases of large samples, to process the result from data collected.

**The Human mind**: The human mind uses logic, understanding, past experiences and strategies to interpret results to test hypothesis.

Deductive logic: Reasoning that begins with a premise (assumptions, widely accepted “truths” then to the conclusion.

Critical thinking: Evaluates information or argument in terms of accuracy and worth.

Inductive reasoning: To observe from where conclusions are drawn, and draw generalisation to the population.

Scientific method: A step by step approach 1) identifying a problem, 2) states the hypothesis , 3) gathering data, 4) analysing and interpretation.

4. Answer any four of the following in about 150 words each:

a) Differentiate between quantitative and qualitative methods.

Quatitative data are anything that can be expressed as a number, or quantified. **Quantitative method** in Research that with the volume or number of things and that involves the measurement of quantity or amount. Quantitative Research focuses in counting and classifying features and constructing statistical models and figures to explain what is observed.

Here, we gather data through observations or through instruments as a stopwatch, a blood test, a video analysis package, or a structured questionnaire. We derive measures or the changing values, called variables from the data, then investigate relationships among the variables.

Qualitative Data that represent nominal scales such as gender, socio economic status, religious preference are usually considered to be qualitative data. These cannot be expressed as a number. **Qualitative research** deals with the quality, type, or components of a group. It is usually exploratory in nature and uses procedures such as in-depth interviews and focus group interviews to gain insights and propose solutions to problems posed by the investigator. Information is gathered through information or themes from texts, conversations or loosely structured interviews, then try to articulate a coherent story.

Qualitative methods applied to a sample often result in a small sample size because (1) subjects are hard to get, the interviews are too time consuming, or (2) the researchers dislike the idea of large samples.

Both types of data are valid types of measurement, and both are used in articles and research journals. If a study aims to find answer to an inquiry through numerical evidence, then make use of the Quantitative Research. However, if the study wishes to explain further why this particular event happened, or why this particular phenomenon is the case, then make use of Qualitative Research. When using qualitative methods to generalize to a population, it needs a large sample to characterize small effects. So a hybrid of qualitative and quantitative may be more profitable for some research.

b) What is the importance of Scientific method?

The job of the scientific method is to provide an objective, standardized approach to conducting experiments and, in doing so, improve their results. Hence, it is the guide to the mental activities and systems needed to solve the complex competitiveness problems.

Centuries of study, debate, and experimentation has established that the best of all methods of obtaining and originating reliable knowledge in all fields is the scientific method. As it has evolved, the method is so pervasive that it can be used in any discipline, forcing the theoretician and experimentalist to complement one another. It bridges the gap between ideas and facts, between speculation and experience, between chaos and order. It allows the sorting of the relevant and useful from the impertinent and delusive.

People using scientific method can mistake a hypothesis for an explanation of a phenomenon without performing experiments.

c) Describe various types of note-taking?

To begin a research work we have to consult relevant sources of information. On determining the reliability and usefulness of the sources, it is required to take notes on it. Notes are commonly drawn from a transient source, such as an oral discussion at a meeting, or a lecture (notes of a meeting are usually called minutes), in which case the notes may be the only record of the event.

To take effective notes, the information contained in the sources should be understand thoroughly. Notes should be taken in such a way that it briefly summarizes the most important points of each source. Main points has to be stressed in the notes and it should be clear and concise as possible. Recorded of notes should be in such a way that we can easily locate all the points related to a particular subject easily and readily identify the source from which a piece of information is taken.

Some take notes by hand on index cards or in sheets of paper of a note book. Some others prefer using a computer to take notes as it will save their time as well as improve the accuracy in transcribing the material from the sources.

Card Style: If notes are taken in cards, each piece of information should be from a source in a separate card. This is good for the accuracy and organisation, but also helps in compiling the bibliography. For multiple notes from the same source, they should be recorded in a short form of the title and author’s last name in the upper right hand corner of each card.

d) What do you know about language game theory?

Language game theory is expressed in the Investigations. This theory moves from the foundations of logic to the nature of the world. Hence, The shift is from the limited understanding of language, language of the natural sciences to the language of wider forms of life. The term 'language-game' is used to refer to:

. Fictional examples of language use that are simpler than our own everyday language.

. Simple uses of language with which children are first taught language.

. Specific regions of our language with their own grammars and relations to other language-games.

. All of a natural language seen as comprising a family of language-games.

The language game theory therefore, is the understanding that the language is determined by rules which are particular to the form-of-life.

This philosophical concept was developed by Ludwig Wittgenstein.

Grammar is not abstract, it is situated within the regular activity with which language-games are interwoven: “… the word ‘language-game’ is used to emphasize the fact that the speaking of language is part of an activity, or of a form of life.”

5. Write short notes on any five of the following in about 100 words each:

a) Prediction from hypothesis

A hypothesis is a suggested explanation of a phenomenon, or alternately a reasoned proposal suggesting a possible correlation between or among a set of phenomena. It is a supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation. It could also be a forecast or a prophecy, for an observed phenomenon.

A useful hypothesis will enable predictions, by deductive reasoning that can be experimentally assessed. The results decide that the hypothesis which was predicted was correct, or incorrect. And hence it requires revision or it should be abandoned. The hypothesis should be substantiated

The experiments are designed and conducted to test a prediction.

b) Negation

Negation is in the first place a phenomenon of semantical opposition. It involves the resolution of a dialectical contradiction which transforms or resolves a thing, situation or process in certain important respects, while also maintaining some similarity or continuity with the previous thing, situation or process in other respects. This relation may be realized syntactically and pragmatically in various ways.

Aristotle partitions indicative-mood declarative sentences into affirmation and negation/denial (apophasis from apophanein “deny, say no”), which respectively affirm or deny something about something. In logic, negation, also called the logical complement, is an operation that takes a proposition p to another proposition "not p", written ¬p, which is interpreted intuitively as being true when p is false, and false when p is true.

c) Intentionality

Intentionality is the power of minds to be about, to represent, or to stand for, things, properties and states of affairs. It is a join of two word “in + tendare” ‘in’ means towards. ‘Tendare’ means tending, tending towards.

Intentionality is the power and the vitality of consciousness. A state that is (phenomenally) conscious is to have an experience, or a state there is something it’s like to be in. eg Feeling pain or dizziness, appearances of color or shape, and episodic thought. Consciousness is co-relational, not just relational. Intentionality, has to do with the directedness, aboutness, or reference of mental states. Hence, Intentionality is like a screen between consciousness and the world onto which objects and acts are projected.

e) Pre-understanding

Pre understanding is an intentional structure of feelings and thoughts, which is activated when we regard something as something. Understanding is the part of human process of growth, which presupposes pre-understanding. Pre-understanding consists not merely of the acts of understanding but to the whole growth process that is at work in every act of understanding. It is therefore implied that understanding from the viewpoint of certain questions is raised by ones pre-understanding.

Understanding means precisely responding to the issue that the pre-understanding raises. Every understanding like every interpretation is continually oriented by the way the question is put and by standpoint. This it is never without a pre-understanding of the matter it is questioning the text about.

f) Instrumental Reason:

‘Reason’, in ancient world was thought to refer to a structure of order inherent in reality. Humans were thought to have a subjective faculty to perceive and respond to that objective structure of the world. It was used to determine goals of humans.

In the post-Enlightenment world reason becomes subjective, formal and instrumental. This desire for totality, is a basic manifestation of “instrumental” reason—the use of reason as an instrument for determining the best or most efficient means to achieve a given end. Ontology also displays a bias toward cognition and theoretical reason—the use of reason in the formation of judgments or beliefs.

Scientific reason, obtained from the instrumental understanding reason, is used to manipulate the world towards human ends. Reason becomes a guide to life only in a very limited sense. But reason goes beyond those limits and retains its internal and immanent critical character.