# **Research Aptitude Notes for UGC NET Paper 1**

**UGC NET (National Eligibility Test)** is noted to be a national level exam which is operated by NTA (National testing Agency) on behalf of the University Grants Commission. It is for approving the eligibility of aspirants for the respective posts of **'Assistant Professor'** or **'Junior Research Fellowship'**.

The UGC NET 2022 online registrations and application shall begin in March 2022 on the official website of CBSE after the release of the official announcement.

## **Research Aptitude – UGC NET**

Research is the innovative and organized work undertaken to improve the stock of knowledge. It concerns the collection and analysis of data to improve the understanding of a topic or issue.

NTA had had Research Aptitude in UGC NET Paper 1 to test the proficiency of aspirants in the education field. It covers nearly 14-18 marks in the exam.

So, if you are training for the NET Exam, then you should understand the visions of UGC NET Research Aptitude.

Here are the entire details of Research Aptitude for UGC NET like syllabus, notes, tips asked in the exam, and more.

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## **Research Aptitude Syllabus for 2022 UGC NET Paper 1**

Research Aptitude is a component of UGC NET Paper 1. It Includes 6 major topics and 12 subtopics in unit 1 like the meaning, its types, characteristics, etc.

Through the given details you can check the whole Research Aptitude Test syllabus released by the official.

TOPICS	SUBTOPICS
Research	Meaning, Types, and Characteristics, Positivism and Post Positivistic Approach to Research.
Methods of Research	Experimental, Descriptive, Historical, Qualitative, and Quantitative methods.
Steps of Research	11 Steps of Research.

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Thesis and Writing	Format and Styles of Referencing
Application of ICT in Research	Effects of ICT on research, Pre-Data Analysis, Data Analysis, Post- Data Analysis
Research Ethics	Elements, Features, Ethical Principles.

The students should follow the syllabus and also study materials to elevate their exam preparation for the UGC NET exam. Here are the precise notes for the exam preparation.

## Research

Research means to search for the existing thing 'something' that remains unknown to us. So, Research indicates to find out something new on the topic that already existed.

- It is a searching procedure for discovering new information about the things we already know.
- It is a scientific examination for searching for necessary information on a distinct topic.
- It can also be directed to as a 'voyage of discovery.

So, you can rephrase the meaning of research as:

- An attitude of exploration/inquiry/investigation,
- A scientific and objective action made to uncover truths,
- Hence, needs the application of scientific methods.

John W. Best describes research as,

"Research is the systematic and objective analysis and recording of controlled observations that may leave to development of generalizations, principles or theories result in prediction and possibly ultimate control of events."

## **Important Types of Research**

There are various types of research covered in the NTA NET Paper 1 Exam. Here, we have delivered some significant types that are typically included in the Research Aptitude Syllabus for **UGC NET**.

**Fundamental Research** - It is refined and theoretical research established on the principle of generalization. Fundamental Research is headed towards finding information that has a wide base application.

**Applied Research -** This type of research discovers a resolution for some specific issue such as identifying social, economic, or political trends. It may concern society or firms.

**Descriptive Research -** It is a qualitative study carried out to know about people's choices. Descriptive Research creates a proper and logical explanation of a problem by collecting true, realistic information through surveys.

**Analytical Research -** This kind of research examines the facts or information which is already functional using logic and reasoning. It is based on secondary data.

**Conceptual Research -** It does not implicate fulfilling any practical experiments. Conceptual Research is generally used by philosophers and thinkers to invent new concepts or to interpret innovative ideas such as Newton's Theory.

## **Characteristics of Research**

The characteristics of research in UGC NET Research Aptitude Notes are as shown below:

- Research is a scientific examination.
- Scientific indicates it demands the use of scientific methods and techniques. That is, methods and techniques which have been tried and tested; and can deliver similar or somewhat similar results on each application.
- The results or data that we get through scientific approaches can be used to design concepts and theories of their own.

#### **Positivism and Post-Positivism Approach**

#### **Positivism:**

- Positivism claims the existence of a true and objective reality that can be studied by involving the methods and principles of natural sciences and scientific inquiry.
- It claims that the object of study is independent of researchers; knowledge is discovered and confirmed through direct observations or dimensions of phenomena; facts are set by taking apart a phenomenon to examine its parts.
- The role of the researcher is to deliver material for the evolution of laws by testing theories.
- Positivists believe in five principles which include
  - •
  - Phenomenalism: (knowledge demonstrated by the senses can be considered as knowledge).
  - Deductivism (the goal of theory is to develop hypotheses that can be tested to make laws),
  - Inductivism (the group of facts that delivers the basis for laws and knowledge).
  - Objectivism (science should be value-free)
  - Scientific statements

#### Post positivism:

- Post Positivism is believed a contemporary paradigm that formed as a result of the criticism of positivism.
- The positivists and post positivists also accept the existence of a single reality.

- They acknowledge that truth can never be fully known and steps to understand reality are limited owing to the human beings' sensory and intellectual limitations.
- The purpose of post-positivist research is also a prediction and description.
- Positivists and post positivists also seek to be objective, neutral and confirm that the findings fit with the existing knowledge base.
- Unlike positivists, they acknowledge and spell out any preconceptions that may impact objectivity.
- Positivism and post-positivism were blocked from use in this study for several causes.

## **Methods of Research**

Experimental Research: Experimental Research has three elements as

follows:

- All autonomous variable is handled.
- All the other variables except (independent variables) are kept constant.
- The result of manipulation of the independent variable on the dependent variable is monitored.
- It starts with a question regarding the relationship between two or more variables. Simultaneously, the researcher creates one or more hypotheses to declare the nature of the expected relationship. The experiment is the event designed and carried out by the
- a researcher who attempts to get evidence.

#### **Historical Research:**

- In this sort of research, the independent variable or variables have already appeared in which the researcher begins with observation of a dependent variable or variables.
- It generally concentrates on the historical part of an issue of interest or problem.

#### **Descriptive Research:**

- It is a quantitative research procedure. In plain words, descriptive research is linked to describing the phenomenon, watching, and creating assumptions from it.
- The reality of learning requests and field studies are the direct substance of descriptive research.
- The fundamental features of this strategy are that the professional has no power over the factors; he can just convey what has occurred or what's going on.

#### **Quantitative Research**

- Quantitative research is involved with numbers. It is carried out to examine a phenomenon that can be described in numbers.
- Quantitative is usually deductive and starts with a given theory.
- Statistical ideas and software (such as STATA, R) are utilized to carry out this sort of research.

#### **Qualitative Research**

- Qualitative research is accomplished to study the phenomenon that can be defined beyond numbers, that is, in a qualitative manner.
- Qualitative is usually inductive and starts with a social reality followed by the structure of the theory around it.

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#### **Steps of Research**

It is the process through which proper research is examined and carried out for presentations. There are 11 steps of Research contained in the **NET Exam Syllabus**.

#### **Step 1: Formulation of the Research Problem:**

The foremost step of a research journey is the formulation of a research situation or topic.

Researchers describe the area of research by determining the problem or research topic. They choose the area of interest of a certain subject or a study of the previous year's research work.

#### **Step 2: Developing Research Proposal:**

After choosing the research topic or problem, the second step is to design a plan of research for the Research Proposal.

#### **Step 3: Development of Working Hypothesis:**

After completing the research proposal, it is essential to assume the situations and to do research studies that are known as hypotheses.

#### **Step 4: Preparing Research Design:**

It is the abstract framework on which the research is to be done. The primary purpose of the research strategy is to take maximum output with minimum possible expenditure, time, and effort.

#### **Step 5: Determine Sample Design:**

A population is split into small subgroups derived as a sample of the analysis. The sample design is a framework that functions as the basis for the choice of a survey sample.

#### **Step 6: Collection of Data:**

The collection of data can be split into two categories:

**Primary Data:** It can be gathered through new experiments, surveys, group discussions, questionnaires, etc.

**Secondary Data:** This type of data has already been gathered & passed by someone else through the statistical method.

#### **Steps 7: Execution of The Research Project:**

The execution or performance of research is important as the Researcher follows that the project is executed systematically.

#### **Step 8: Analysis of Data:**

After gathering the data, it should be placed properly and classified into two categories -

Irrelevant Data - It should be divided.

**Relevant Data -** It is coded into symbols so that it may be arranged.

The arrangement is a part of a technical procedure that has organized data in the table form.

#### **Step 9: Hypothesis - Testing:**

After examining the data, the researcher can test the framed hypothesis in various ways like chi-square, F-Test, T-Test, etc. It will help you to understand whether it can be taken or left.

#### **Steps 10: Interpretation and Recommendation:**

The gathered data is examined, summarized, linked with the research objective, and presented by finding new theories, recommended new concepts and principles.

#### **Steps 11: Report Writing and Presentation:**

At last, scholars make a report and conclude the research data in detail. It is presented in simple language and appealing manner by using charts, graphs, illustrations wherever essential and applicable.

## **Thesis and Article Writing**

The thesis is a treatise that illustrates the completion of the scholarly aspiration of the student. A good thesis should be precise and have a logical structure that should help the reader's

understanding of the argument being delivered and not unobtrusive. To accomplish this objective, the layout and physical appearance of the thesis should fit a set pattern.

#### **Title Page**

- Title of the Research Project
- Name of the researcher
- Purpose of the research project
- Date of Publication

#### **Table of Contents**

This section included the contents of the report, either in chapters or in subheadings.

#### List of Tables

This section contains the title and page number of all tables.

#### **List of Figures**

This section includes the title and page number of all graphs, pie charts, etc.

#### Acknowledgments

Here, the researcher may acknowledge Institute Principal, Faculty Guide, research guide and technical guide, research participants, friends, etc. And this section presents the research setting out purposes and objectives. It contains a justification for the research.

#### **Theoretical Framework and Review of Literature**

This section is contained all your background research, which may be received from the literature review. You must reveal where all the information has come from, so remember to keep a whole record of everything you read. If you do not do this, you could be charged with plagiarism which is a form of academic theft. When you are directing to a certain use the Harvard system.

#### **Research design**

This section contains all practical details observed for research. After reading this, any curious party should be capable to reproduce the research study. The techniques used for data collection, how many people took part, how they were selected, what device was used for data collection, how the data was interpreted etc.

#### **Data Analysis and Interpretation**

If you have completed a large quantitative survey, this section may include tables, graphs, pie charts, and associated statistics. If you have completed a qualitative piece of research, this section may be descriptive prose.

#### **Summary and Conclusion**

In this section, you sum up your findings and conclude them, perhaps concerning other research or literature.

#### Recommendation

If you have completed a piece of research for a hotel or any other client organization, this section could be the most significant part of the report. A list of clear guidance that has been created from the research is included. Sometimes, this section is included at the starting of the report.

#### **Suggestion for Further Research**

It is valid in both academic reports and work-related reports to contain a section that demonstrates how the research can be continued. Perhaps some results are inconclusive, or perhaps the research has thrown up many more research questions that ought to be handled. It is useful to possess this section because it indicates that you are conscious of the broader picture and that you are not attempting to cover up something which you feel may be lacking in your work.

#### List of References/Bibliography

- The list of references includes details only of those works cited in the text.
- A bibliography contains sources not cited in the text, but which are appropriate to the subject.
- Small research projects will require only a reference section. It contains all the literature to which you have referred in your report.

## **Application of ICT in Research**

Information and Communication Technology (ICT) is an umbrella term that contains any communication device or application, enclosing: radio, television, cellular phones, computer, and network hardware and software, satellite systems, and so on, as well as the different services and applications associated with them, such as videoconferencing and distance education.

Typically, ICT helps the researcher in the following research-related chores:

- Identify research areas & identify relevant information sources through searching various online portal
- Literature survey & critically analyses general information for further reading
- use the details to extend and communicate knowledge across subject area fields with the vast community
- Choose Methods for research
- Data Collection manage information/data collectively
- Referencing
- Present/share / disseminate Instantaneous information exchange despite geographical distances, cost less accumulation of data and documents
- Search numerous databases and electronic resources simultaneously
- retrieve results in a common format to consume
- link to other individual databases for more technical searching &select favored resources and e-journals, save searches and records and set up email alerts.

The part & application of ICT in research and Higher Education academic work can be largely divided into 4 main areas:

Communication – How ICT has transformed the way the researcher communicates with other parties.

Information Transfering – How quickly & efficiently the information can be transferred across the globe.

Simulation – Virtual Lab & robotic experiments

Evaluation-Different devices and technology for feedback and evaluation.

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### **Research Ethics**

There are different reasons behind the low standard of research in different study fields, but

the most significant reason is connected to the ethics of research. These ethical issues are not an unexplored thing it was presented by 'Plato' twenty-four hundred years ago. Newly

UGC- endorsed list of journals were made to provide published papers that are of a high standard along with the purpose to perform research in an ethical way. The guidelines involve many possible contexts including teaching, working research, paper publication, or misconduct along with disciplinary processes.

- Research Ethics is a group of guidelines that support researchers to perform research successfully. The main principles revolve around the research process, data collection, interpretation of data, report publication, thesis, confidentiality, obfuscation, and plagiarism.
- Ethics are near related to ethics and value, it defines norms for conduct that distinguishes between 'what is wrong' & 'what is right'.
- It enables a research culture that attaches to 'relevant legislation governing the protection of the dignity, rights, safety and privacy of those affected in research;' 'provide clear and easily available guidance on best ethical practice and regulatory conditions; 'offer help and activity to staff and students and any others.
- The Policy document includes not just the things that constitute ethical research but also applies out the 'Ethical Review Process' and the part of the University Research Ethics Committee.
- The researcher and the team are accountable for guarding the dignity, rights, security, and well-being of the participants enrolled in the study. They should have the proper credentials and competence in research methodology and should be conscious of and concede with the scientific, medical, ethical, legal, and social requirements of the research proposal.
- The ECs are accountable for confirming that the research is performed following the aforementioned principles.

## **UGC NET - Research Aptitude Books**

UGC NET - Research Aptitude Books	Author Name
Trueman's UGC NET/SET General Paper I	M. Gagan, Sajit Kumar
NTA UGC NET / SET / JRF – Paper 1	Arihant Experts
CBSE UGC-NET: Teaching and Research Aptitude	Dr. M.S. Ansari
A New Approach to Reasoning Verbal and Nonverbal	B.S. Sijwali and Indu Sijwali

## How to Prepare for UGC NET Research Aptitude Exam

What does it take to grab the UGC NET exam? Well, it needs tremendous commitment and concentration with a sound study plan, hard work, and wise preparation.

The Entri Learning App provides quality study material and the best advice to assist you in your **NET Exam Preparation**.

Here we discussed some tips and tricks of Research Aptitude for the UGC NET Exam. These will support you score better in the exam.

Know the entire syllabus and create a study plan by covering the following important topics:

- Meaning and characteristics of Research
- Types of Research.
- Positivism and Post Positivistic Approach to Research
- Methods of Research
- Steps of Research
- Thesis and Article Writing
- Application of ICT in Research

Comprehend the basic concepts of research so that you can have in-depth learning of it. Learn all the significant definitions during the exam day. Solve previous year's question papers and UGC NET Mock Test Papers to know your strong and weak zones. Avoid stuffing for better learning methods to concentrate more on understanding the real meanings and methods.

The study notes provided here have connected all these topics and explained them in an easier way. Along with these notes, it is good to have explored the UGC NET Research Aptitude Books that cover all the topics. Make sure you have the right book for practice that will help you to get good marks.

Apart from all these tips, it is very crucial to be confident and stay positive. Without that nothing can be accomplished. Stay clear and attain your goals.

Students training for the UGC NET Paper 1 comprehend that Teaching Aptitude is one of the most significant sections of the paper 1 syllabus. The primary objective of UGC NET EXAM PAPER is to access the teaching and research quality of the candidates. Through this article, the <u>Entri Learning App</u> is desired at collecting all required details and UGC NET Paper 1 Notes for better study.

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