A STUDY OF INTELLIGENCE LEVEL OF TENTH GRADE HIGH SCHOOL STUDENTS OF DISTRICT HAMIRPUR IN HIMACHAL PRADESH IN RELATION TO THEIR AGE, GENDER AND LOCALE

A

PROJECT REPORT

SUBMITTED TO

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CERTIFICATE

It is certified that the Project entitled, "**A Study of Intelligence Level of Tenth Grade High School Students in Relation to their Age, Gender and Locality of District Hamirpur in Himachal Pradesh**", was conducted by Ms. Kavita Dhiman as Investigator and Mrs Sunita Datta as Co-Investigator. Both are the employees of Raj Rajeshwari College of Education, Governed by Raj Rajeshwari Education Society Village Chorab (Mansui), PO Bhota, Tehsil Barsar, District Hamirpur (HP)-176041. The said project was financed by Raj Rajeshwari Education Society and has been submitted to us after completion on dated 30-03-2024. Hence, approved by Raj Rajeshwari Education Society.

Dated: 30-03-2024

(Kulbir Singh)

Secretary

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Dated: (Kavita Dhiman)

(Sunita Datta)

INDEX

LIST OF TABLES

CHAPTER-I

THEORETICAL ORIENTATION

INTRODUCTION

In our day-to-day conversation we often comment that a particular child or individual is very intelligent or is not intelligent. All such comments are based on our observation of the performance or behaviour of the individual concerned in comparison to others of his group. What makes an individual behave or perform well or not well in his group? Interest, attitude, the desire for knowledge, communicative skill and similar other attribute towards his performance or behaviour. However, there is something else which is also responsible to a large degree. In psychology this is termed intelligence; in ancient India our great rishis and seers named it **Viveka.**

Intelligence is the aggregate of individual to act purposefully, to think rationally and to deal effectively with his/her environment. It can be called as the capacity to acquire knowledge. In order to solve any problem, knowledge should be applied in the right manner with the help of intelligence. Educationists consider intelligence as the mental ability which helps the individual to think about minute, complex and abstract matters, to adjust with changing situations by solving problems as quickly as possible, to acquire with ease knowledge, proficiency and aptitude in different subjects, to explain new situations with the help of prior experience, to arrive at conclusions by determining the exact relations between various elements, to utilize our energy by keeping the emotions and impulse under control whenever necessary in achieving the goal. Man, however, has surpassed other creatures in the development of brain and this development has made him superior to other species in his behaviour and in control of his environment. But it is well-known fact to us all, that the individuals have different capabilities to adapt and change this environment. One thinks differently from the other. He solves the problems concerning to his environment and to overcome the hurdles in the way of his progress and in paving new paths of his progress quickly than his fellows. One feels it difficult to adjust with his peers while the others are very efficient in doing. So thus, it can be said that a person's intelligence manifests itself through different activities and not through a particular activity (Gupta and Basu, 2006)

CONCEPT OF INTELLIGENCE

Intelligence has been defined in many different ways such as in terms of one's capacity for logic, abstract thought, understanding, self-awareness, communication, learning, emotional knowledge, memory, planning, creativity and problem solving.

Intelligence is most widely studied in humans, but has also been observed in animals and in plants. Artificial intelligence is the simulation of intelligence in machines.

MEANING OF INTELLIGENCE

1. Derivative meaning: The word intelligence comes from a Latin word which means "cognitive processes."
2. Dictionary meaning: Intelligence is "the capacity to accumulate knowledge and put it into use."

DEFINITIONS OF INTELLIGENCE

1. Ability to adjust: One group of definitions emphasis that intelligence is the ability to adapt or adjust to new situations. Ross, Burt, Stern, Woodworth, Ebbinghaus, Binet, McDougall, Goddard, William James and many others belong to this group.

(i) View of Ross: "Conscious adaptation to new situation is intelligence."

(ii) Burt's view: "Intelligence is the capacity of flexible adjustment."

(iii) Stern's view: "Intelligence is the ability to adjust oneself to a new situation."

(iv) Woodworth's view: "Intelligence means intellect put to use. It is the use of intellectual abilities for handling a situation or accomplishing any task."

(v) Piaget's view: "Intelligence is the ability for adaptation to physical and social environment."

(vi) William James' view: "Intelligence is the ability to adjust oneself successfully to relatively new situation of life."

2. Ability to learn: According to another group of psychologists' intelligence is the ability to learn. Buckingham, Dearborn, Thorndike and Colvin belong to this group.

(i) Buckingham's view: "Intelligence is the ability to learn."

(ii) Dearborn's view: "It is the capacity to learn or profit by experience.

(iii) Thorndike's view: "Intelligence is the ability to make profitable use of past experience."

(iv) Woodworth's view: "Intelligence is the ability to acquire knowledge."

3. Ability to learn on abstract thinking: According to this group of definitions, intelligence is the ability to carry on abstract thinking. Spearman, Terman, Binet, Burt, Garret and Gates and others represent this group.

(i) Spearman's view: "Intelligence is relational thinking."

(ii) Terman's view: "An individual is intelligent in proportion as he is able to carry on abstract thinking."

(iii) Binet's view: "Intelligence is a capacity to think well, to judge well and to be self-critical."

(iv) Burt's view: "intelligence is ability to judge well, to comprehend well, to reason well."

(v) Garret's view: "Intelligence is the ability to solve problems which require the comprehension and use of symbols i.e., words, numbers, diagrams, equations, formulae."

(vi) View of Gates and Others: "Intelligence is a composite organisation of abilities to learn, to grasp broad and subtle facts especially abstract facts."

What intelligence is Not?

1. Not knowledge: Intelligence is not knowledge, though it is related to it. The amount of knowledge, one can acquire is limited by one's knowledge.

2. Not talent: Intelligence is not the same as talent. Talent involves two things: (a) Native capacity and (b) Practised skill. Intelligence is native capacity.

3. Not memory: Intelligence is not memory even. It has been observed that sometime persons with low intelligence have very good memory.

4. Not skill: Intelligence is different from skill. Skill is acquired through practice and can be perfected by more practice. But intelligence cannot be enhanced by practice.

Types of Intelligence:

(1) Hebb's view:

D.O. Hebb classified intelligence into (a) Genotype intelligence, (b) Phenotype intelligence.

(a) Genotype intelligence: It represents and innate, inborn or native capacity which depends entirely on the biological or neurological system of an individual. Hebb calls it *intelligence A.*

(b) Phenotype intelligence: It develops on the basis of interaction between genotype intelligence and environment influences. Phenotype intelligence is the result of environment and cultural forces particularly during childhood and adolescent period. Hebb calls it *intelligence B.*

(2) Cattell's view:

Cattel classified intelligence into (a) Fluid intelligence and (b) Crystallized intelligence.

(a) Fluid intelligence: It is the inherited potentiality of an individual.

(b) Crystallized intelligence: It is based on environmental factors.

(3) Thorndike's view: Thorndike suggested three broad categories of intelligence:

(a) Abstract intelligence: Abstract intelligence is the ability to understand and manage ideas and symbols, such as words, number, chemical or physical formulas, legal decisions, scientific principles and the like. In the case of students this is very close to scholastic aptitude. Generally, scholars, executives in business and government, and scientists possess high abstract intelligence.

(2) Mechanical intelligence: Mechanical intelligence includes the ability to clean, to understand and manage things and mechanisms, such as knife, a gun, a moving machine, a boat, a lathe, an automobile, etc. Mechanics, builders, expert carpenters and plumbers possess high mechanical intelligence.

(3) Social intelligence: Social intelligence is the ability to understand and manage men and women, boys and girls to act wisely in human relations. High social intelligence is found in politicians, sales people and leaders in society.

A successful civil engineer presumably possesses high abstract as well as high mechanical intelligence; the successful criminal lawyer possesses abstract as well as social intelligence.

Characteristics of Intelligence:

1. **Innate:** Intelligence is an innate, natural power and not acquired.
2. **Varies:** Power of intelligence differs from individual to individual.
3. **Helpful in learning and adjustment:** It helps the individual in learning things and making adjustments.
4. **Helpful in solving problems:** it helps the man to face and solve the complicated and difficult problems and situations.

5. **Influenced by heredity:** Heredity exercised a good deal of influence on intelligence.
6. **Influenced by environment:** Environment, training or education affect intelligence. Studies by Freeman and Holzinger, Freeman and Flory, Terman and Merril, Tudenhem, Kephart and Schmidt illustrate this point.
7. **Influenced by socio-economic factors:** Socio-economic and cultural factors as well as racial differences affect intelligence tests scores.
8. **Not influenced by sex:** There is no difference in intelligence due to differences in sex.
9. **Average intelligence:** Intelligence tests have proved that generally children are of average intelligence and ability.
10. **Ceases:** Development of intelligence ceases towards the middle of adolescence.
11. **Relationship between intelligence and knowledge:** there is close relationship between intelligence and knowledge. Knowledge that may be of practical use in life may be termed as intelligence. With the help of intelligence knowledge ca be acquired but with knowledge it is not possible to develop greater intelligence. In the words of Ross, "wisdom is the goal and knowledge is the only means of reaching it."

Marks of Intelligent Behaviour:

Woodworth mentions the following marks of intelligent behaviour:

1. **Use of past experiences:** An intelligent man makes more use of his past experience to seek a goal. Utilizing past experience is a mark of intelligence.
2. **Adaptation to a novel situation:** An intelligent person can easily adapt himself to a novel situation. He can master a complex situation. Capacity to master a novel situation is a mark of intelligence.
3. **Seeing the point:** Intelligence consists in seeing the point or finding out the essentials of a problem or insight into the key of the situation.
4. **Viewing actions from a broader point of view:** An intelligent person takes a broad view of a situation and adapts his actions to it. He has a foresight. He is able to see the situation as a whole. He finds out the key to the situation. A stupid person cannot take a broad view of a situation. His perspective is narrow. He follows a fixed routine in his actions.

MEASUREMENT (ASSESSMENT) OF INTELLIGENCE: VERBAL, NON-VERBAL AND PERFORMANCE TEST

Early History: many attempts have been made to measure intelligence by various methods. The measurement movement has passed through various stages.

(i) Phrenological Approach: By the end of 18th century Gall discovered phrenological approach to measure intelligence. Phrenology denotes the size of the head. Gall held the intelligence is directly proportional to the size of the head i.e., the larger the head, the greater is the intelligence of the individual. This view was rejected by Pearson.

(ii) Stage of Physiognomy: Physiognomy is the science of shape of features of the face. Features of face were taken to be an index of intelligence. According to this view it was held that an individual having sharp and bright facial features is an intelligent individual and on the other hand the person who does not possess bright facial-features is not intelligent. But it was found that many students having bright faces did not fare well in the school. So, this view was rejected.

(iii) Brass Instrumental Stage: Psychologists tried to find out certain instruments to find intelligence. So, the first attempt was made to calculate intelligence with the help of instrument known as aesthesiometer. With this instrument psychologists calculated Aesthiesometric Index of the skin. They held that the lower the Aesthiesometric Index, the greater will be the intelligence. This view was also rejected because skin index (resistance) differs from individual to individual. Moreover, it also differs at various parts of the body in the same individual.

(iv) Measuring Different Faculties: Next, various attempts were made to measure the different faculties of the individuals which comprise intelligence. In this direction most notable attempts were made by Galton. He invented Galton's Bar and Galton's Whistle

(v) Modern Stage (Intelligence Tests)

Intelligence tests may be classified broadly as follows:

1. **Individual Tests:** Intelligence tests are given to individuals. They are meant to test the intelligence of individuals. Individual tests of intelligence are of two types: Verbal Individual Tests and Performance Individual Intelligence Tests.

2. Group Tests of Intelligence: As the name suggests group tests are designed to test the intelligence of a group and not of the individual. All the people in the group are given the same directions and have to perform the same activities.

Wiktionary, 4 October, 2006 "Capacity of mind, especially to understand principles, truths, facts, or meanings, acquire knowledge, and apply it to practise; the ability to learn and comprehend."

Wordnet 2.1, 2006 "The ability to understand and profit from experience."

RESEARCH QUESTIONS

In view of the review of the related literature it is evident that there is lack of studies to assess general mental ability of students in relation to their age, gender and locality only. Hence, the present study is very much needed and justified. The present study has addressed the following research questions:

I Is there any difference in the intelligence test scores in English of Govt. and Private recognised Schools?

II Is there any difference in the intelligence level of pupils with respect to their age (group 13 to 17 years studying in Govt. and Private recognised schools)?

III Is there anydifference in the intelligencelevel among pupils with respect to their gender.

IV Is there any difference in the intelligence level among pupils with respect to their locale.

STATEMENT OF THE PROBLEM

Keeping in view the importance of intelligence in our daily life and throughout life it was thought worthwhile by the investigator to undertake the following investigation:

"A Study of Intelligence Level of Tenth Grade High School Students in Relation to their Gender and Locality".

OBJECTIVES OF THE STUDY

The present study was conducted to attain the following objectives

1. To assess the general intelligence of the pupils with respect to their gender.
2. To assess the general intelligence of the pupils based on their locality.
3. To assess the general intelligence of pupils with respect to their age.

HYPOTHESIS

1. There will be no significant difference in the general intelligence of the pupils with respect to their gender.
2. There will be no significant difference in the general intelligence of Govt. and Private recognised school students based on their locality.
3. There will be no significant difference in the general intelligence of pupils with respect to their age.

DELIMITATIONS OF THE STUDY

The study was delimited with respect to the following:

1. The study was delimited to the Govt. and Private recognised High Schools of District Hamirpur in Himachal Pradesh.
2. The study was conducted only on 100 students of Govt. and Private High School Students.
3. The study was delimited to purposive technique of non-probability sampling.
4. The study was delimited to one dependent variable (Age) and Two independent variables (Group Intelligence and gender).
5. The study was delimited to the statistical techniques of Mean, SD, and t-test only.
6. The study was delimited in terms of time money and resources.

SIGNIFICANCE OF THE PRESENT RESEARCH STUDY

Intelligence is the ability to think, to learn from experience, to solve problems, and to adapt to new situations. Intelligence is important because it has an impact on many human behaviours.

An intelligence test is designed to understand ability. It does this by assessing critical thinking, learning abilities and so on. Thomas' General Intelligence Assessment (GIA) measures an individual's aptitude in 5 key areas : Reasoning, Perpetual Speed, Number Speed, & Accuracy, Word Meaning and Spatial Visualisation.

So how does it help recruiters? Here are five reasons how it can help.

1. **It makes recruitment more targeted:** If you have a specific role that you are looking to get fulfilled, already knowing if the candidate can learn or adapt to the new job or regime is a bonus from the get-go. It also removes from the selection those that aren't suitable but may be for a different position.

2. **It saves time and money:** Before a candidate steps into the office, knowing if they have the skills to perform the tasks is a massive advantage. Our test is performed online and we get a body of data from the results that help identify the candidate you want to speak to saving time from having to meet and talk to everyone or a large group of candidates over the course of a few days.
3. **You get future insights into your candidates:** Not only will you be getting a more rounded selection of candidates based on what they are trying to achieve with a move into your business, you get an insight into how they can solve problem and perform moving forwards.
4. **Your candidates are treated equally in testing:** Some people struggle with interviews, other excel. This does not mean that the candidate who has great people skills might be right for the role or vice versa. What this does do is focus on the and weaknesses that you won't get from a standard sit-down interview; making this process fairer to the candidates and to the business involved.
5. **Recruitment is adapting to an ever-changing working environment:** With recent global events face-to-face meetings are harder and technology can't always be trusted. In the ever-changing environment having more data to base decisions is going to be crucial and with online testing that helps you get the pick of the candidates you want.

Intelligence assessment have become a critical part of the recruitment process. They not only give valuable information and insights, they help determine and identify the candidates that can show the skills to help garner long term results. Used correctly, businesses can pick out individuals that show how much they can adapt, learn and grow within the business whilst also reducing costs and saving time. Thomas' GIA designed to help businesses discover more about the candidate that businesses can work with. The GIA can help you answer questions about your workforce including, can' your people think their feet? Can they cope with the mental demands of the job? Are they good problem solvers? And how quickly can they learn?

OPERATIONAL DEFINITIONS OF THE STUDY

Education: The act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgement, and generally of preparing oneself or

others intellectually for mature life. The act of imparting or acquiring particular knowledge or skills, as for a profession.

Intelligence:

Biological meaning: Intelligence is the capacity of the individual to adapt or adjust to environmental situations.

Psychological meaning: Intelligence is an innate general cognitive ability (capacity for abstract thinking and reasoning).

Operational meaning: Its emphasis specific characteristics of intelligent behaviour and measurement of these specifications. Hence, intelligence is "what intelligence tests measure", as measured by the **Group Test of Intelligence by Dr. G.C. Ahuja.**

High School Students: high school students mean a public-school student enrolled in any of grades nine through twelve.

GENDER: According to Oxford English Dictionary Gender is defined as "A state of being male and female" typically used with social and cultural differences rather than biological one or it simply refers to a subject's gender, i.e., male and female.

LOCALE: Locality in this study refers to the rural and urban high schools.

REVIEW OF RELATED LITERATURE

LITERATURE REVIEW

The term review means to arrange the knowledge of the particular area of research to develop constructive knowledge to show that the study at hand would be an addition to this field. It provides the investigator necessary knowledge and insight on what to begin with and how to begin? The scholars must remain acquainted with the current knowledge, innovations and discoveries in the field of science. Accordingly, a successful lawyer must also remain well informed of the cases so as to quote them for future reference of the case at hand. Similarly, in the field of education a researcher needs to update himself with the latest knowledge and information about what has been done in the particular area from where he intends to take up a research problem. In order to solve a particular problem, a careful review of the Research Journals, books, dissertations, thesis and other sources of information related to the problem must be taken into consideration after the problem has been selected by the researcher.

The Review of related literature also serves the following purposes:

1. The review of related literature enables the researcher to define the limits of his field of research. It helps the researcher to delimit and define his problem.
2. The knowledge of related literature brings the researcher up to date.
3. By reviewing the related literature, the researcher can avoid unfruitful and useless/unwanted area.
4. Through the review of the related literature the researcher can avoid unintentional duplication of well establish findings.
5. It helps the researcher to know about the tool and instruments which were useful and promising in the previous studies.
6. The important and specific reason for reviewing the related literature is to know about the recommendations of previous researchers listed in their study for further research.

The investigator explored the previous literature relevant to the present study and could collect the following research studies which bear direct and indirect relevance to the present study.

GENERAL STUDIES CONDUCTED ON INTELLIGENCE

Thorndike (1914) Intelligence may be defined as the "power of good responses from the point of view of truth or fact.

Stern (1914) defines intelligence as a general capacity of an individual consciously to adjust his thinking to new requirements. It is the general mental adaptability to new problems and conditions of life.

Terman (1921) states that an individual is intelligent in the proportion that he is able to carry on abstract thinking.

David Wechsler (1944) defines intelligence as the aggregate or global capacity of an individual to act purposefully, to think rationally, and to deal effectively with his environment.

Jean Piaget (1952) intelligence is the ability to adapt to one's surroundings. (Bracken and Macallum 1998)

Armstrong (1994) intellectual ability involves comprehension, understanding and learning experience.

Craft (2000), each of the two hemispheres of the brain appears to have its own specialization and processes information in its own way; and of course, in the normal brain, the hemispheres communicate with each other through corpus callosum, the mass nerve fiver which bridges the hemispheres. For the great majority of the population, it is the left hemisphere that controls logical and linear thinking. This is the side that can compute mathematics, remember names, learn to read and memorize. By contrast, the other hemisphere is the part of the brain where metaphors are understood, where emotions are felt and where dreams, imageries and fantasy occur. The left hemisphere of the brain is dominant for the following tasks: analytical, mathematical, verbal, linear and literal. The left hemisphere may, then, be particularly good at 'convergent' thinking. By contrast, the right brain appears to be dominant for the following activities; metaphoric, imaginative, non-verbal, holistic (non-linear), spatial, musical, artistic, emotional, sexual, spiritual, and dreams. The right hemisphere may be particularly good at supporting 'divergent' thinking-and creativity more widely.

Mangal (2003) the true nature of intelligence is that its distribution is not equal among all human beings.

Hossein (2011) found that it is necessary to take the role of Invitational Education and intelligence beliefs into account when studying academic performance.

Jones (2011) found that many high school students believed that intelligence was malleable.

Lawrence (2013) found that there is no significant difference between intelligence and academic achievement of high school students.

Shah (2016), found students having High Level of Emotional Intelligence were found to have higher Intelligence than Students having Low Levels of Emotional Intelligence, which shows that Level of Emotional Intelligence of secondary school students is affecting variable to intelligence.

STUDIES CONDUCTED ON INTELLIGENCE AND AGE

Brody (1992) Intelligence varies from individual to individual but is also tends to vary on the same individual from age to age and situation to situation. As the child grows in age, so does the intelligence as show in the intelligence tests. The age at which mental growth ceases, varies from individual to individual. It tends to stabilize after the age of ten and is fully

stabilized during adolescence. **The idea that intelligence continues to grow throughout life is strictly not true.**

STUDIES CONDUCTED ON INTELLIGENCE AND GENDER

Dandekar & Sanyaglatha (2000) noted that difference in sex also do not contribute towards difference in intelligence. And intelligence is not the birth right of any particular caste, race or cultural group and the differences which are found can be the result of environmental factors and influences.

Chandra (2013) revealed that there is a significant influence of Intelligence on academic achievement whereas gender has not significantly influenced the academic achievement.

M. Usha Rani & S. Prakash (2015) found that there is significant difference in intelligence test scores of high school students in terms of locality and gender.

Shah (2016) found that Boys having High Level of Emotional Intelligence were found to have higher Intelligence than Girls having High Levels of Emotional Intelligence, which shows that gender of secondary school students of High-Level Emotional Intelligence, is affecting variable to Intelligence.

Shah(2016)found that boys and girls having Low Level Emotional Intelligence were found to be equal in Intelligence, which shows that gender of secondary school students of low-level Emotional Intelligence, is not affecting variable to Intelligence.

STUDIES CONDUCTED ON INTELLIGENCE AND RURAL AND URBAN HIGH SCHOOLS

Shah (2016) found that the students of Urban Area having High Level of Emotional Intelligence were found to have higher Intelligence than the Students of Rural Area having High Levels of Emotional Intelligence, which shows that area of secondary school students of High-Level Emotional Intelligence, is affecting variable to Intelligence.

Shah (2016)stated that students of Urban and rural Area having Low level Emotional Intelligence were found to be equal in Intelligence, which shows that area of secondary school students of low-Level Emotional Intelligence, is not affecting variable to Intelligence.

REFLECTION ON STUDIES

This section tries to represent the findings of the research evaluated in order to support and justify the need for the current investigation. As a result, variable-by-variable reflection on studies is given as under:

Age and Intelligence

The review of the related research on age and intelligence found that intelligence varies from age to age and situation to situation. As the child grows in age, so does the intelligence as show in the intelligence tests. The idea that intelligence continues to grow throughout life is strictly not true Brody (1992).

Gender and Intelligence

The review of the related research on gender and intelligence found that difference in sex also do not contribute towards difference in intelligence Dandekar and Sanyaglatha (2000). Chandra (2013) revealed that there is significant influence of Intelligence on academic achievement whereas gender has not significantly influenced the academic achievement. Bankim G. Shah (2016) found that boys having high levels of emotional intelligence were found to have higher intelligence as compared to girls having high levels of emotional intelligence, which shows that, gender is affecting variable to Intelligence. He also found that boys and girls having low level emotional intelligence found to be equal in intelligence. M. Usha Rani & S. Prakash (2015) found that there is significant difference in intelligence test scores of high school students in terms of gender.

Locale and Intelligence

The review of related research on locale and intelligence found that the students of Urban Area having High Level of Emotional Intelligence were found to have higher Intelligence than the Students of Rural Area having High Levels of Emotional Intelligence, which shows that area of secondary school students of High-Level Emotional Intelligence, is affecting variable to Intelligence Bankim G. Shah (2016). Bankim G. Shah (2016)stated that students of Urban and rural Area having Low level Emotional Intelligence were found to be equal in Intelligence, which shows that area of secondary school students of low-Level Emotional Intelligence, is not affecting variable to Intelligence.

CHAPTER-II

METHOD AND PROCEDURE

INTRODUCTION

Research in common parlance refers to a search for knowledge. One can also define research as a scientific search for pertinent information a specific topic. In fact, research is an art of scientific investigation. Dictionary definition of research is a careful investigation or inquiry specially through search for new facts in any branch of knowledge. Some people consider research as a movement from the known to the unknown. It is actually a voyage of discovery. We all possess the vital instinct of inquisitiveness. When unknown confronts us, more and more our inquisitiveness makes us probe and attain understanding of the unknown. This inquisitiveness of whatever the unknown, can be termed as research.

Research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody, research comprises defining and redefining problems, formulating hypothesis. D. Slesinger and M. Stephenson in the Encyclopaedia of Social Sciences define research as "the manipulation of things, concepts or symbols for the purpose of generalising to extend, correct or verify knowledge, whether that knowledge aids in construction of theory or in the practice of an art." Research is, thus, an original contribution to the existing stock of knowledge making for its advancement.

Methodology

Research methodology is a systematic way to solve the problem. It is a science of studying how research is to be carried out. Essentially the procedure by which researcher carry on their work of describing, explaining and predicting phenomenon is called research methodology. It is also defined as the study of method by which knowledge is gained and its aim is to give the work plan of research.

Research methodology typically involves a full breakdown of all the options that have been chosen by the researcher in order to investigate something. It provides us the necessary training in choosing methods, materials, scientific tools and training in techniques relevant for the chosen problem. Research methodology involves such general activities as identifying problem, review of related literature, formulating hypothesis, procedure for testing hypothesis, measurement, data collection, analysis of data, interpreting results and drawing conclusion(s).

Thus, research methodology consists of all general and specific activities of research. A well thought out action plan followed by systematic execution brings about fruitful results. Research is not a disorderly task but it requires proceeding in a definite direction, done with right intention of taking a particular problem and a sincere effort to find a solution in a scientific manner. The present chapter describes the methodology and procedure, which has been followed in the present study.

RESEARCH METHOD

A researcher in order to initiate data collection for his/her research study should be familiar with various research methods. Research requires the guidance of a particular research method to proceed in his/her study.

Research methods are individual tools, techniques, or behaviour a researcher uses to collect information.

The Historical, Empirical, Experimental, Casual-Comparative Method, Descriptive and Case Study are some of the research methods for performing educational research that experts have classified. Depending on the type of the problem, each approach should be used in the right case.

Method implies a manner in which a thing is done or in which it happens. Method refers to a settled kind of procedure, usually according to a definite, established, logical, or systematic plan: one method of solving a problem.

The present study was conducted through descriptive survey method of research. This research method is most commonly used in educational research.

Descriptive Research

Revised on June 22,2023

Descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions. A descriptive research design can use a wide variety of research methods to investigate one or more variables. According to Best (1995), “Descriptive research is also known as non-experimental or conventional research, deals with the relationship between variables and testing of the hypothesis and development of generalization, principles or theories

that have universal validity. The present study aimed at studying the Intelligence Level of Tenth grade High School Students in relation to their age, gender and locale (rural, urban).

SAMPLING

The selection of a sample is an essential part in every research study. The generalization of a result is determined by the sample's "goodness". Non generalizable results are incredibly inefficient because conducting an analysis takes a lot of time and effort; if any of the findings were correct for the population on which they were based, educators would never learn from someone else's work, and each study would have to be replicated an almost infinite number of times.

According to Jopnes, 1955; Salant & Dillman, 1994, "Sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population."

Types of Sampling

There are two types of sampling viz. probability sampling and non-probability sampling.

A. Probability Sampling: Probability samplings methods are those where the units are drawn randomly by providing equal probability to all. The probability sampling can be made by using the following techniques:

(i) Simple random sampling

(ii) Systematic sampling

(iii) Stratified sampling

(iv) Multistage sampling

(v) Cluster sampling

B. Non-Probability Sampling: Non-Probability sampling methods are those where the units are selected on the considerations of convenience of judgment of the researcher. The techniques of Non – Probability Sampling includes:

(i) Incidental or Accidental sampling

(ii) Purposive Sampling

(iii) Quota Sampling

(iv) Judgemental Sampling

In the present study simple random sampling technique of probability sampling was used for data collection to study the general intelligence of high school students.

Population

The **population** refers to the collection of specific groups of human being or of non-human entities. It is the entire group that you want to draw conclusions about. In research a population doesn't always refer to people. Therefore, the present study consisted of students of Government Senior Secondary School Students and Private Senior Secondary School Students of District Hamirpur of Himachal Pradesh.

Population is a group of individuals or items that share one or more characteristics from which data can be collected and analysed. Population is the statistical concept which means a group of large number of units from which a smaller group of a few units is selected and used for achieving some purpose. According to Kerlinger (1978) [79] population is generally defined as "all the members of any defined class of people, events or object". The Population is defined in term of their specific characteristics. In educational researches they are called

"Target Population," more often defined as "all the members of a real or a hypothetical set of people, event objects or other units". It is a large group scattered over a small group concentrated in limited narrow area. Population is homogeneous with regard to characteristics. Hence, each heterogeneous population can have homogeneous population means the totality of these units. On the other hand, when population is vaguely defined, it becomes difficult to judge what units are to be considered when taking the sample. Van Dalen (1973), suggested that "conclusions cannot be drawn concerning a population until the nature of units that comprise it, is clearly identified". He further observed that many investigators produce disappointing results because they use available population frame without investigating the units that were used to compile and without ascertaining whether all members of population

were included. Sometimes, they select unit list that are out of data, or duplication or do not adequately represent the population of the study.

The population target in the present study includes the government and private high school students of Hamirpur District of Himachal Pradesh.

SAMPLING FRAME

Selection of a sample from a given population for investigation is very essential to comprise a complete, accurate and up to-date list of the entire units in the population. Such a list is known as sample frame. In the current study 100 high school students of government and private recognised schools belonging to district Hamirpur of Himachal Pradesh.

The Sample and Techniques of Sampling

Dictionary.com describes the meaning of sample as "The sample is a portion, piece or segment that is representative of a whole". It is an entity which shows the representative of a class, a group, a specimen etc. Bias in sample selection can be made representative of the population by selecting it randomly. A random sample comprises small error in predicting value of population and this error can be estimated as well. Thus, the objective should always be to draw a representative sample. A sample plan has to be prepared. If the plan guarantees well enough that the chances are more occurring that selected sample in representative of the population, it is called a representative sample plan. It makes sure selecting diverse element and making sure that these diverse elements are represented adequately in the sample.

Sampling is the basis of any scientific study or investigation. Since in educations research it is practically impossible to work with the entire population, so the technique of random sampling was used. Instead of every unit of population, only a part of population was drawn and studied for the present study. The investigator selected 40 students of Government Senior Secondary School and 60 students of Private Senior Secondary School of district Hamirpur, Himachal Pradesh. Distribution of the sampling breakup school wise is given in table-1.

SAMPLE STRUCTURE

The structure of the sample has been presented with the help of Table. The following table-3.3.2 presents the school-wise contribution sample in terms of gender, locale and age.

Table-1

School-wise Distribution of the Sample

Sr no	Name of school	Gender		Locale		Age	
		Male	Female	Rural	Urban	Low age (13)	High age (14-15)
1	GSS School, Bhota	10	10	10	10	1	19
2	Govt High School, Ropri	10	10	10	10	8	12
3	Seven Star International School, Bani	10	10	10	10	11	9
4	IIM Sr Sec School, Bhota	10	10	10	10	10	10
5	SD Public School, Hamirpur	10	10	10	10	1	19

RESEARCH TOOL

Data collection is an important part of research. In order to collect the requisite data for any theme of research, you have to devise appropriate tools and use suitable measuring techniques, and decide on the relevant attributes of the samples drawn. There are several research tools, varying in design, operation, complexity of features, and interpretation. In certain situations, you may find select from a list of available tools. In other situations, you may find that existing research tools do not suit your purpose or objective of research and, therefore, you may like to modify them or develop your own. Each tool is appropriate for collecting a particular type of data or information which lends itself to a particular type of analysis and interpretation for drawing meaningful conclusions and generalisations. For this, you need to familiarise yourself with the nature, merits and limitations of various research tools.

Description of the tool used to test the Intelligence Level of High School Students

The name of the tool is "Group Test of Intelligence", developed by Dr. G.C. Ahuja. The present test was devised in order to meet the pressing demand for a group test of intelligence in English.

The Construction of the test

PURPOSE

A psychological test is an objective, organised and statistically refine instrument or method to measure some specific skill, behaviour or set of characteristics under standardized conditions. The construction and standardization of such a test is largely a creative undertaking with is constructed in accordance with definite principles. The present test was devised in order to meet the pressing demand for a group test of intelligence in English. The test is meant for assessing the general mental ability of pupils of age group 13 to 17 years studying in classes VIII to XI through English Medium Secondary Schools of Greater Bombay.

Construction

The preliminary draft of the test was prepared containing 261 items covered under **eight** different subtests. The instructions and explanations for practice examples were carefully worded. A separate answer sheet was also introduced. After some preliminary administrations, thus, **126 best** possible items were selected and retained under seven sub-tests. In each sub-test, the selected items were graded in ascending order of difficulty. One sub-test of very easy

items was retained in the beginning of the battery as a practice test. The main purpose of including the additional test is to enable the pupils to get acquainted with the nature and working of the test. It is expected that it will serve the purpose of building morale in the students and thus develop confidence in them. **The performance of this test is not to be taken into account.**

The total testing time for all the eight sub-tests was 32 minutes. The time required for instructions and practice was approximately 35 minutes. Thus, the battery of eight tests could

ADMINISTRATION OF THE TOOL

Before administering the test, the instructions given in the test booklet were read and explained to the students so as to enable them to understand the purpose of the test and how it indicates their responses on the test booklet.

SCORING

The scoring for all items in the questionnaire was done following instruction and procedure given in the manual.

There are eight sub-tests in the test booklet. A set of scoring stencils was provided. The investigator had to put the relevant stencil key on each page of the answer sheet. It should be so adjusted that the page numbers are visible through the holes of the scoring stencil. Then the correctly marked (cross marks) were visible through the holes. Then the number of right answers were counted and written on the left margin against each sub-test of that page.

Answer sheets were also inspected to determine whether a student marked more than one answer. If in the same item more than one answer was marked it was scored as wrong.

The same procedure was followed for all the sub-tests except for Test VII. In that case the correct answers were the alternatives that correspond with the numbers given on the stencil key. After that the wrong marked answers and un-attempted questions were marked and then deducted from the total number of items contained in the Test, the balance was the correct score for the said sub-test.

VARIATE STRUCTURE

According to H.E. Garrett, "Variable are attributes or qualities which exhibit differences in magnitude and which vary along some dimensions". In research, variables are any characteristics that can take on different values, such as height, age, temperature or test scores. Researchers often manipulate or measure independent and dependent variables in studies to test cause-and-effect relationship.

Types of Variables

There are two types of Variables found in research:

1. **Independent Variables**- Independent variable is the cause. Its value is independent of other variables in the study.

2. **Dependent Variables**- Dependent variable is the effect. Its value depends on changes in the independent variable.

CLASSIFICATION OF SUBJECTS

The subjects have been classified into two groups on the basis of Gender (Male and Female), Locale (Rural and Urban), Age (Low age and High Age).

PROCEDURE OF DATA COLLECTION

After having the question-booklet, the investigator visited the different schools for the purpose of collecting the data.

STATISTICAL TECHNIQUE USED

In the present statistical technique of Mean, SD, and the "t"-test were employed.

$$'t' = \frac{|M_1 - M_2|}{\sqrt{\frac{(SD_1)^2}{N_1} + \frac{(SD_2)^2}{N_2}}}$$

Where:

't'= the t-value

M_1 = Mean score of first group

M_2 = Mean score of second group

SD_1= Standard deviation of first group

SD_2 = Standard deviation of second group

N_1 = Sample size of first group

N_2 = Sample size of second group

Df = (degree of freedom) was calculated by subtracting 2 from N = $(N_1+N_2) - 2 = N - 2$

The 0.05 and 0.01 levels of significance were used for determining the significance of obtained 't'–values.

Mean: The mean of a distribution is understood as the arithmetic average. It is perhaps the most familiar; most frequently used and well understood average. The mean of a set of observed scores is obtained by dividing the sum of all the values of scores by the total number of scores.

The formula to find out the mean:

$$M = \frac{\Sigma x}{N}$$

Where:

M = Mean

$\sum$ = Sum

X = Score in distribution

N = Total Number of Score

Standard Deviation (S D)

The average of the squared deviations of the measures of the scores from their mean is known as the variance. The standard deviation is the positive square root of variance.

$$\sigma = \frac{\sqrt{\Sigma X^2}}{N}$$

Where:

σ = Standard Deviation

Σ = Sum

X^2 = Sum of the scored X

N = Total Number of scores.

In which

X = deviation of the row score from the mean.

N = number of scores or measures.

CHAPTER-III

ANALYSIS AND INTERPRETATION OF DATA

INTRODUCTION

Good research is characterized by the care taken in the analysis and interpretation of data. It includes the selection of appropriate quantitative and qualitative techniques to be used for processing the data collected for the study.

The analysis and interpretation of data represents the application of deductive and inductive logic to the research process. After administering and scoring research tool, collected data is known as 'raw data'. The raw data is meaningless unless they are critically analysed and analytically interpreted. Certain statistical treatment is given to them in order to make them meaningful.

Analysis and interpretation of data refers to that part of study, which is associated with the drawing of the inferences from the collected facts and figures. Analysis makes the raw data meaningful to draw conclusions from the date after proper treatment. All data is collected with a view to draw certain conclusions about the problem. Analysis involves the breakdown of existing complex problem into simpler parts and putting the parts together in a new setting for the purpose of interpretation. It means studying the tabulated material in order to determine inherent facts and meanings.

Analysis and interpretation of the data provides the evidence to accept or reject the research hypothesis. Therefore, this step is most important and critical in research studies.

The analysis and interpretation of the collected data for a particular study is important to draw conclusion(s), as data itself is meaningless. The analysis is followed by interpretation.

Data collection is the most crucial part of the research process. In the present chapter attempts have been made to apply various statistical techniques to analyse the collected data from school students to assess their general intelligence level. The data been analysed as per the hypothesis framed. To obtain significant results, the mean, S.D. and the 't' test were calculated. In the present study, a sample of 100 boys and girls of high school students of

District Hamirpur Himachal Pradesh belonging to different Age (13-17), Gender (Boys/Girls), Locale (Rural/Urban)was taken by the researcher.

Differences in the General Intelligence Level Based on Their Age

This table -2 shows the calculated statistics level of Low and High Age school students towards general intelligence

Table - 2

Intelligence Level	**Low age (13)**		**High age (14-15)**		**'t'-value**	**Significance**
	Mean	SD	Mean	SD	0.16	**NS**
	64.32	18.15	69.69	16.23		

NS: Not Significant

From table-2 it is clear that there is no significant difference in the general intelligence level of students between the age group of 13 to 17, as calculated 't'-value was found to be non-significant. In other words, we can say that more or less on the average high and low age group school students had similar level of intelligence. Hence, the hypothesis stating that, "there will be no significant difference in the general intelligence level of high school students between the age group of 13 to 17", is **accepted.**

Differences in the General Intelligence Level Based in Their Gender

The table-3 shows the calculated statistics level of male and female high school students.

Table-3

Intelligence Level	**Female (N=50)**		**Male (N=50)**		**'t'-value**	**Significance**
	Mean	SD	Mean	SD	**0.57**	**NS**
	69	17.4	67.06	17		

NS= Not Significant

From Table-3 it is clear that there is no significant difference between Female and Male high school students in their general intelligence level as the calculated 't'-value 0.57 was found to be non-significant. In other words, it can be said that more or less on the average boys and girls of high schools had similar level of intelligence.Hence, thehypothesis stating that,

"there will be no significant difference in the intelligence level of Female and Male high school students" is **accepted.**

Difference in the General Intelligence Level Based in Their Locale

The table-4shows the calculated statistics level of Rural and Urban high school students.

Table-4

	Rural (N=30)		**Urban(N=70)**		**df**	**'t'-value**	**Significance**
Intelligence level	Mean	SD	Mean	SD		7.05	*
	59.4	12.19	72.09	17.3			

***= Significant**

The table-3 shows that, there is significant difference in the intelligence level of Rural and Urban high school students, as calculated 't'-value **7.05** was found to be significant at 0.01 level of intelligence. It means that General Intelligence Level of Urban High School Students is more than that of Rural High School Students. Hence, the hypothesis stating that, ''there will be no significant difference in the intelligence level of Rural and Urban high school students'' is **rejected.**

DISCUSSION OF THE RESULTS

This section deals with discussion on findings of the present study in a systematic manner as given below:

Differences in the General Intelligence Level of High School Students Based on Age, Gender and Locale.

The first finding of the present study referring to age differences in general intelligence revealed that no significant differences was found in high school students with respect to their age. The finding of the study was supported by the previous research studies conducted by Brody (1992).

The second finding of the present study referring to gender difference in general intelligence revealed that no significant differences was found in male and female high school students. The finding of the study was assisted by the previous studies conducted by Dandekar

& Sanyaglatha (2000), Chandra (2013), M. Usha Rani & S Prakash (2015), Bankim G. Shah (2016).

The fourth finding of the present study referring to locale difference in general intelligence revealed that significant difference was found in rural and urban high school students. The finding of the study was in agreement with the previous research studies conducted by Bankim G. Shah (2016).

CHAPTER-IV

CONCLUSION, EDUCATIONAL IMPLICATIONS AND SUGGESTIONS

FOR FURTHUR RESEARCH

"A Study of Intelligence Level of Tenth Grade High School Students with respect to their Gender, Age and Locality".

INTRODUCTION

This chapter provides an account of logical conclusion drawn from data analysis and interpretation in terms of a summary of the study's results, their educational implications and insightful suggestions for further investigation.

CONCLUSION

Intelligence may be understood to be a mental energy available with an individual which enables him to cope with his environment in terms of adaptation and dealing with novel situations as effectively as possible.

The more comprehensive picture of the concept of intelligence may emerge if, certain important factors about its nature are known; namely, that intelligence is normally distributed in nature; it is a product of both heredity and environment, it grows with age and its vertical growth ceases at the age of 16 to 20; it shows a wide variety of individual difference by factors like sex, age, culture, colour etc. are not found to influence the degree of intelligence.

Intelligence cannot be measured in the same way as we measure a piece of cloth or the temperature of the body. It can only be assessed. This assessment is carried out through intelligence tests categorized as individual and group tests involving the use of verbal and non-verbal material.

In individual tests, we test one individual at a time whereas in group tests, a group of individuals may be tested at the same time. There are numerous individual and group tests, some of which are paper and pencil tests and thus essentially require the use of language, while others are language-free tests. The results of such tests may be affected by many factors inherent in testing conditions, the child's background of experience and other favourable or

unfavourable elements. Hence no administrator, teacher or student of education should accept test results as the only measure of an individual's ability to learn.

EDUCATIONAL IMPLICATIONS

- **Classification or grouping pupils for school work:** A teacher can use intelligence tests together with all other information available about the child to place him with others of his ability in smaller groups, the composition of which will vary from subject to subject and from time to time.
- **For diagnosing disabilities in school subjects:** We can compare the score representing in a school subject and the mental age and find the retardation in the subject.
- **For determining the optimum level of work:** The primary aim of education is to assist each child to make best possible use of his capacities. It is a general measure of a pupil's capacity to succeed in his school work. The mental age gives the mental level at which a child can be expected to work most efficiently in academic subjects.
- **Identification of intellectual deviations:** it is a problem to find who is bright and who is dull. This is to found, otherwise a teacher may force adult child to do what is beyond his capacity, or fail to assist the gifted to make use of his exceptionally great capacity. So, the extreme cases are to be discovered. The very dull child is likely to be recognised sooner or later as also the gifted. One of the most important problems is giving education coping with mentally defective and identifying and cultivating the potential capacity for leadership which gifted children have.
- **Educational and Vocational guidance:** The fact that intelligence is positively related to vocational competence and to attainments in college work has definite practical **implications. The educational or vocational counsellor can use the score of intelligence** test along with other data to predict a pupil's success in college or in many vocations. Though vocational success depends upon other factors as well: health, persistence, interest and aptitudes, yet intelligence is a potent factor.
- **Estimating the range of abilities in a class:** The teacher can note the range of ability in the class. A group may contain neither very bright, nor very dull. In other words, the range be very large. This gives teacher a difficult task in adjusting assignments, methods of instruction. Achievement tests are, therefore, supplemented by intelligence tests to find the range.
- **Measuring special abilities:** Aptitude tests can predict the ability to achieve in music, art and various mechanical and social lines.

- **Diagnosing subject-matter difficulties:** At the elementary level when a child has little choice of subjects, the readiness test is valuable as a diagnosis. It gives the teacher information about the areas in which the child needs more training.
- **Research:** Intelligence test results can be pooled and utilised for research purposes.
- **Selection:** In the school children are chosen for various purposes and activities through intelligence tests.
- **Guidance and organisation of learning activity.**

4.3 SUGGESTIONS FOR FURTHRER STUDIES

1. A study of intelligence level of primary school students in relation to their gender and locality.

2. A study of intelligence level of primary school students in relation to their gender and grade.

3. A study of intelligence level of primary school students in relation to their age and living.

4. A study of intelligence level of primary school students in relation to their parent's education and living.

5. A study of intelligence level of primary school students in relation to their parent's economic status and living.

6. A study of intelligence level of senior secondary school students in relation to their age and locality.

7. A study of intelligence level of adolescents in relation to their gender and locality.

8. A study of intelligence level of adolescents in relation to their gender and stream.

9. A study of intelligence level of adolescents in relation to their age and locality.

10. A comparative study of intelligence level of senior school students and college students in relation to their gender and stream.

11. A comparative study of intelligence level of senior school students and college students in relation to their locality.

12. A study of relationship of creativity and intelligence level of government senior secondary school students in relation to their gender and stream.

13. A study of relationship of creativity and intelligence level of private senior secondary school students in relation to their gender and stream.

14. A comparative study of relationship of creativity and intelligence level of government senior secondary school students and private senior secondary school students in relation to their gender and stream.

15. A comparative study of relationship of creativity and intelligence level of senior secondary school students in relation to their gender and locality.

16. A study of achievement and intelligence level of students in senior secondary schools in relation to their stream.

17. A study of intelligence level of government senior secondary school teachers in relation to their stream and monthly income.

18. A study of intelligence level of convent/private senior secondary school teachers in relation to their stream and monthly income.

19. A comparative study of intelligence level of government senior secondary school teachers and intelligence of convent/private senior secondary school teachers in relation to their stream and monthly income.

20. A study on different forms of intelligence in Indian school-going children in relation to their age and locality.

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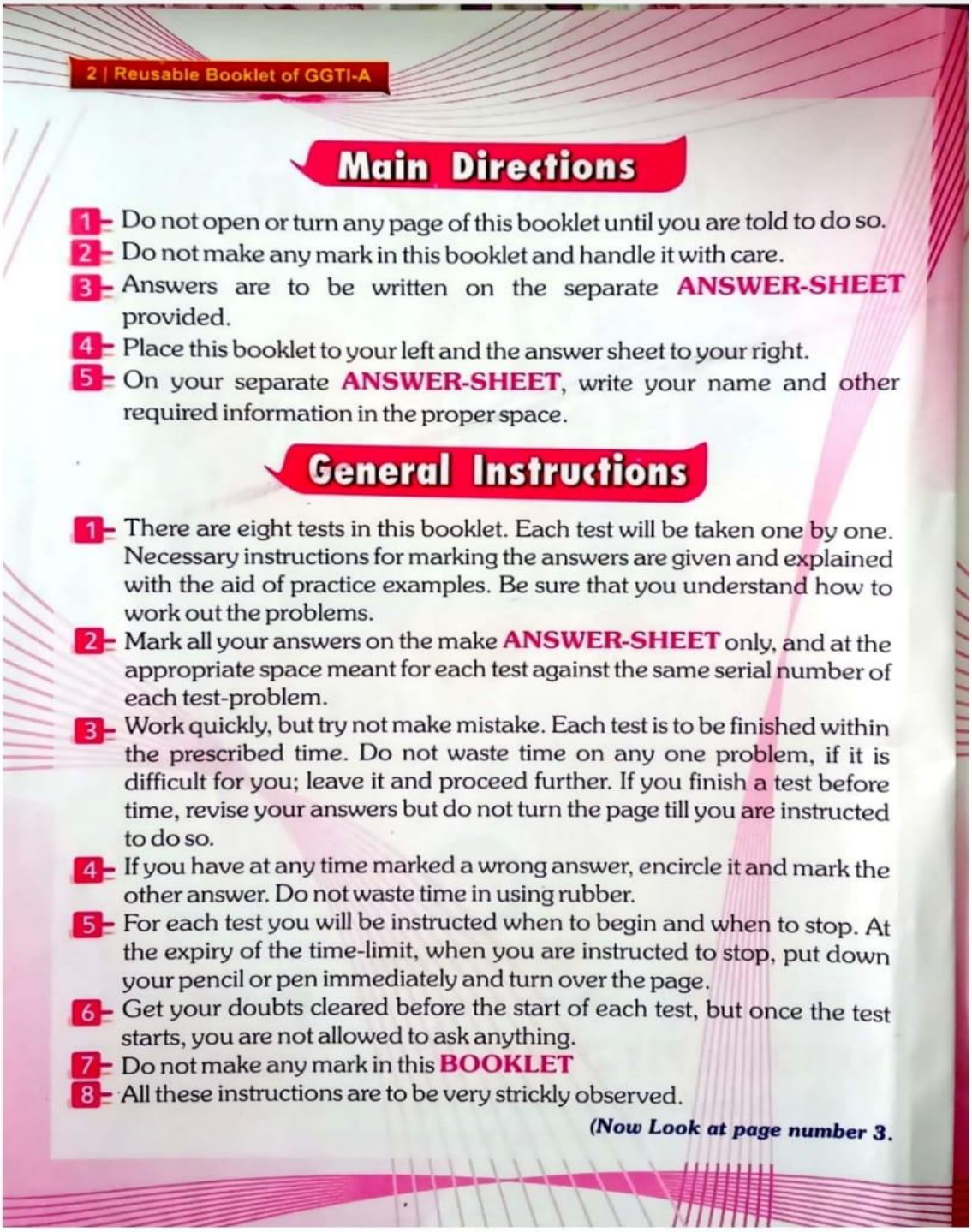
APPENDICS - A & B

APPENDIX -A



2 | Reusable Booklet of GGTI-A

Main Directions

1. Do not open or turn any page of this booklet until you are told to do so.
2. Do not make any mark in this booklet and handle it with care.
3. Answers are to be written on the separate **ANSWER-SHEET** provided.
4. Place this booklet to your left and the answer sheet to your right.
5. On your separate **ANSWER-SHEET**, write your name and other required information in the proper space.

General Instructions

1. There are eight tests in this booklet. Each test will be taken one by one. Necessary instructions for marking the answers are given and explained with the aid of practice examples. Be sure that you understand how to work out the problems.
2. Mark all your answers on the make **ANSWER-SHEET** only, and at the appropriate space meant for each test against the same serial number of each test-problem.
3. Work quickly, but try not make mistake. Each test is to be finished within the prescribed time. Do not waste time on any one problem, if it is difficult for you; leave it and proceed further. If you finish a test before time, revise your answers but do not turn the page till you are instructed to do so.
4. If you have at any time marked a wrong answer, encircle it and mark the other answer. Do not waste time in using rubber.
5. For each test you will be instructed when to begin and when to stop. At the expiry of the time-limit, when you are instructed to stop, put down your pencil or pen immediately and turn over the page.
6. Get your doubts cleared before the start of each test, but once the test starts, you are not allowed to ask anything.
7. Do not make any mark in this **BOOKLET**
8. All these instructions are to be very strickly observed.

(Now Look at page number 3.

TEST - I

PRACTICE EXAMPLES

EXAMPLES :

1. **I-F-E.V.**

   A. Wife **B.** Few **C.** If We **D.** Five **E.** Fine

2. **I-G-T-H.L.**

   A. Sight **B.** Flight **C.** Light **D.** Tight **E.** Right

EXPLANATION :

1. Here four letter are given, which are to be arranged in such a way that every letter should be used. The letters are : **I-F-E-V.** Now observe the given answers which are marked A,B,C,D, and E. The correct answer in '**FIVE**'. From the letters **I-F-E-V,** only '**FIVE**' can be formed, which is at 'D'. Look at the **ANSWER SHEET** for **TEST I** (Practice Examples in the first column at the space means for page 3 of the Booklet) against Serial Number 1, a cross mark (Like the Multiplication Sign [x] is made on D.

2. The correct answer is at 'C' Mark it yourself. In the **ANSWER SHEET** against Serial Number 2, make a cross [x] on C.

HOW TO MARK THE TEST PROBLEMS :

You have to make a cross [x] on any of the five answers which are : A,B,C,D, and E, where you make a cross [x] that would be considered your answer. Put one cross mark only, otherwise, you would not be given any credit. Make a cross against the same Serial Number of the Test Problem on the **ANSWER-SHEET** only.

FOR TEST 1, WHERE TO MARK :

You have to mark on the **ANSWER SHEET** at the space meant for TEST I Problems at **BOOKLET** Page 4.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 9 Test Problems in **FOUR** Minutes :

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - I

TEST PROBLEMS

1. H-I-E-S-M-I-F-C

A. Semicircle **B.** Mischief **C.** Knife **D.** Scientific **E.** Handkerchief

2. A-T-L-E-C-B-S-O-N

A. Stable **B.** Table **C.** Subtraction **D.** Capable **E.** Constable

3. T-U-A-C-P-U-N-T-I-O-N

A. Station **B.** Recapitulation **C.** Punctuation **D.** Repetition **E.** Television

4. H-G-T-I-H-E

A. Eight **B.** Highest **C.** Tiger **D.** Height **E.** Tight

5. G-E-N-A-L-A-G-U

A. Gauge **B.** Luggage **C.** Old Age **D.** Language **E.** Longitude

6. C-T-A-D-I-N-O-O-M-M-O-A-C

A. Commodity **B.** Recommendation **C.** Accommodation
D. Declaration **E.** Communication

7. N-O-P-I-S-R

A. Piston **B.** Prime **C.** Prisoner **D.** Pioneer **E.** Prison

8. R-E-N-A-T-S-I-G-U

A. Singer **B.** Signature **C.** Singular **D.** Restaurant **E.** Resignation

9. E-D-E-I-N-D-E-N-P-T-N

A. Dependent **B.** Development **C.** Independent **D.** Implement **E.** Introduction

STOP HERE

TEST - II

PRACTICE EXAMPLES

EXAMPLES :

1.	**A.** Blade	**B.** Razor	**C.** Axe	**D.** Knife	**E.** Crow
2.	**A.** Iron	**B.** Silver	**C.** Vegetable	**D.** Gold	**E.** Copper
3.	**A.** Monday	**B.** July	**C.** Tuesday	**D.** Friday	**E.** Sunday

EXPLANATION :

1. In the first example, look at all the five words. Out of these five, four words are related to each other in some way, but there is one such word which is absurd and has nothing to do with the other four words. As your know that : Blade, Razor, Axe and Knife are instruments, but the word Crow which is at 'E' has nothing to do with these, Now look at the **ANSWER SHEET** for **TEST II** (Practice Examples in the first column at the space meant for pages 5 of the **BOOKLET**) against Serial Number 1, a cross mark [X] is made on E.
2. Similarly, the word Vegetable at 'C' is not related to the remaining four words. Mark it yourself. Against Serial Number 2, make a cross [X] on C.
3. Mark it yourself. Against Serial Number 3, make a cross [X] on B.

FOR TEST II WHERE TO MARK

You have to make on the **ANSWER SHEET** at the space meant for **TEST II** Problems at **BOOKLET** Page 6.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - II

TEST PROBLEMS

1.	A. Cow	B. Horse	C. Donkey	D. Pigeon	E. Buffalo
2.	A. Delhi	B. Mumbai	C. Calcutta	D. New York	E. Chennai
3.	A. Brother	B. Uncle	C. Grand Mother	D. Niece	E. Servant
4.	A. Labourer	B. Lawyer	C. Doctor	D. Professor	E. Engineer
5.	A. Scholarship	B. Prize	C. Freeship	D. Needy	E. Award
6.	A. Discussion	B. Lecture	C. Debate	D. Speech	E. Soliloquy
7.	A. Indian	B. Japanese	C. Russian	D. American	E. Bengali
8.	A. Century	B. Gross	C. Enough	D. Score	E. Dozen
9.	A. Building	B. Mansion	C. Residence	D. Bungalow	E. Den
10.	A. India	B. Pakistan	C. England	D. Goa	E. China
11.	A. English	B. Mathematics	C. Hindi	D. French	E. Latin
12.	A. Photo	B. Snap	C. Reflection	D. Portrait	E. Picture
13.	A. Explain	B. Relate	C. Speak	D. Sing	E. Reveal
14.	A. Leg	B. Knee	C. Toe	D. Ankle	E. Palm
15.	A. Classfellow	B. Colleague	C. Companion	D. Co-worker	E. Neighbour
16.	A. Article	B. Kind	C. Category	D. Grade	E. Class
17.	A. Knife	B. Sword	C. Dagger	D. Gun	E. Razor
18.	A. Godown	B. Stable	C. Meadow	D. Garage	E. Store
19.	A. Sailor	B. Passenger	C. Mahout	D. Driver	E. Pilot
20.	A. Favour	B. Affection	C. Love	D. Linking	E. Regards

STOP HERE

TEST - III

PRACTICE EXAMPLES

EXAMPLES :

1. **Shoe is to Foot, as Cap is to :**
   A. Hand **B.** Head **C.** Hat **D.** Cloth **E.** Uniform
2. **To be Rich one must have :**
   A. Wealth **B.** Goodluck **C.** Friends **D.** Business **E.** Locker
3. **Train is to Passengers as School is to :**
   A. Teachers **B.** Parents **C.** Students **D.** Players **E.** Naughty

EXPLANATION :

1. As Shoe is meant for the foot, similarly, Cap is for the head. The word Head is at 'B' Now look at the **ANSWER SHEET** for **TEST III** (Practice Examples in the first column at the space meant for page 7 of the **BOOKLET**) against Serial Number 1, a cross mark [X] is made on B.
2. To be Rich, one must have 'Wealth' because, without it no one can be said to be Rich. Mark it yourself. Against Serial Number 2, make a cross [X] on A.
3. The correct answer is at 'C'. Mark it yourself. Against Serial Number 3, make a cross [X] on C.

FOR TEST III WHERE TO MARK

You have to mark on the **ANSWER SHEET** at the space for **TEST III** Problems at **BOOKLET** Page 8.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - III

TEST PROBLEMS

1. **Train is to Wheels, as Bird is to :**
   A. Air **B.** Wings **C.** Flesh **D.** Bones **E.** Beak
2. **Failure is to Sadness, as Victory is to :**
   A. Work **B.** Happiness **C.** Player **D.** Soldier **E.** Enemy
3. **Coal is Black, as Grass is to :**
   A. Animal **B.** Green **C.** Meadow **D.** Nature **E.** Graze
4. **Dog is to Nose, as Elephant is to :**
   A. Trunk **B.** Circus **C.** Emperor **D.** Ears **E.** Teeth
5. **Water is to sea, as Sand is to :**
   A. Camel **B.** Desert **C.** Stone **D.** Building Material **E.** Heat
6. **Iron is to Heavy, as Cotton is to :**
   A. Weight **B.** Cloth **C.** Light **D.** Mill **E.** Farmer
7. **Lock is to Key, as Bottle is to :**
   A. Fill **B.** Label **C.** Cork **D.** Shape **E.** Screw
8. **Foot is to Socks, as Hand is to :**
   A. Gloves **B.** Finger **C.** Ring **D.** Arm **E.** Cripple
9. **To be a Scholar, one must have :**
   A. Health **B.** Library **C.** Monkey **D.** Spectacles **E.** Ability
10. **Camera is to Photo, as Tap is to :**
    A. Pipe **B.** Metal **C.** Height **D.** Water **E.** Children
11. **Alive is to Awake, as Dead is to :**
    A. Conscious **B.** Unconscious **C.** Brave **D.** Coward **E.** Asleep
12. **Former is to Later, as Elder is to :**
    A. Older **B.** Aged **C.** Younger **D.** Next **E.** Tailor
13. **Taxi is to Hire, as House is to :**
    A. Occupant **B.** House Tax **C.** Homeless **D.** Rent **E.** Owner
14. **Principal is to Vice Principal, as Monitor is to :**
    A. Teacher **B.** Head Master **C.** Second Monitor **D.** Student **E.** Class
15. **Friendship always involves :**
    A. Courtesy **B.** Enthusiasm **C.** Contention **D.** Agreement **E.** Co-operation
16. **Theater is to Spectators, as Police Station is to :**
    A. Constable **B.** Inspector **C.** Gentleman **D.** Court **E.** Accused
17. **Blood is to Veins, as Pencil is to :**
    A. Lead **B.** Write **C.** Rubber **D.** Pen **E.** Eye
18. **Copying in the Examination Hall is an act of :**
    A. Kindness **B.** Bravery **C.** Foolishness **D.** Entertainment **E.** Indiscipline
19. **Beautiful is to Ugly, as Love is to :**
    A. Handsome **B.** Parents **C.** Enjoy **D.** Hate **E.** Soul
20. **Hair is to Head, as Finger is to :**
    A. Hand **B.** Body **C.** Palm **D.** Thumb **E.** Point

STOP HERE

TEST - IV

PRACTICE EXAMPLES

EXAMPLES :

1. How many pencils can be bought for Rs. 3, in each pencil costs 30 Ps. ?
   A. 20 **B.** 15 **C.** 1 **D.** 25 **E.** 10
2. There are three packets of biscuits. Each packet contains one biscuit more than the other in order. In the first packet, there are 22 biscuits. How many biscuits are there in the third packet ?
   A. 28 **B.** 24 **C.** 23 **D.** 20 **E.** 21

EXPLANATION :

1. Each pencil costs 30 Ps. and there are three rupees, or we may say 300 Ps. Thus, 10 pencils can be bought. The correct answer is at 'E'. Look at the **ANSWER SHEET** for **TEST IV** (Practice Examples in the first column at the space meant for page 9 of the Booklet) against Serial Number 1, a cross mark [X] is made on E.
2. Each biscuit packet contains one biscuit more than the other, and the first packet, contains 22 biscuits. Thus the second packet would contain 23. Similarly, the third packet would contain 24. The correct answer is at 'B'. Mark it yourself. Against Serial Number 2, make a cross on B.

FOR TEST IV, WHERE TO MARK

You have to make on the **ANSWER SHEET** at the space for **TEST IV** Problems at **BOOKLET** Page 10.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 6 Test Problems in **FOUR** Minutes.

Note : For Test IV, no calculations are to be shown anywhere.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - IV

TEST PROBLEMS

1. In an Arithmetic test, a student attempted 6 questions and secured 60 percent marks. How many questions did he miss ?

   A. 6 **B.** 8 **C.** 4 **D.** 12 **E.** 2

2. If a piece of cloth 10 meters long will shrink to 7 meters when washed how many meters long will a 40 meters long cloth be after shrinking ?

   A. 21 **B.** 20 **C.** 24 **D.** 28 **E.** 35

3. In which of the following ways could 192 pens packed ?

   A. 17 boxes with 16 pens each
   B. 14 boxes with 13 pens each
   C. 28 boxes with 19 pens each
   D. 16 boxes with 12 pens each
   E. 12 boxes with 11 pens each

4. A boy sold his pen and with that amount purchased 4 pencils for 19 Ps. each. He had a balance of 24 Ps. with him. For how many Rs. & Ps. did he shell his pen ?

   A. 1.50 **B.** 1.00 **C.** 0.90 **D.** 2.20 **E.** 2.00

5. Three students utter a whole number each. Each speaks the square of the other in order, but the number remains the same. What was such number.

   A. 3 **B.** 16 **C.** 27 **D.** 0.1 **E.** 1

6. How many oranges can be bought for Rs. 5, at the rate of 2 for 25 Ps. ?

   A. 20 **B.** 100 **C.** 40 **D.** 10 **E.** 5

STOP HERE

TEST - V

TEST PROBLEMS

1.	Broad.....Narrow	21.	Satisfied.....Contended
2.	Victory.....Defeat	22.	Fresh.....Stale
3.	Net.....Neck	23.	Confess.....Oral
4.	Vanish.....Disappear	24.	Diminish.....Lesson
5.	Quality.....Stretch	25.	Lend.....Borrow
6.	Excellent.....Splendid	26.	Maximum.....Mature
7.	Ancient.....Modern	27.	Relate.....Narrate
8.	Recite.....Ring	28.	Retain.....Keep
9.	Confused.....Puzzled	29.	Frank.....Filthy
10.	Declare.....Announce	30.	Permit.....Prohibit
11.	Organ.....Ounce	31.	Harsh.....Severe
12.	Spy.....Invert	32.	Perplex.....Puzzle
13.	Pardon.....Forgive	33.	Dejected.....Depressed
14.	Pyre.....Petrol	34.	Generous.....Liberal
15.	Clarity.....Military	35.	Exile.....Banish
16.	Mingle.....Mix	36.	Prestige.....Reputation
17.	Queer.....Strange	37.	Breadth.....Wide
18.	Mend.....Repair	38.	Humble.....Meek
19.	Danger.....Risk	39.	Obvious.....Evident
20.	Vanquish.....Root	40.	Omit.....Exit

STOP HERE

TEST - V

TEST PROBLEMS

1.	Broad.....Narrow	21.	Satisfied.....Contended
2.	Victory.....Defeat	22.	Fresh.....Stale
3.	Net.....Neck	23.	Confess.....Oral
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19.	Danger.....Risk	39.	Obvious.....Evident
20.	Vanquish.....Root	40.	Omit.....Exit

STOP HERE

TEST - VI

TEST PROBLEMS

PASSAGES :

A. The real life of India is not in the cities; it is in the homes of the ordinary people; it is in the villages. The cities present only, one side of the picture, but the majority of the people of India live almost on the borderline of starvation.

B. Once a poor widow who had lost her only son came to Buddha and prayer to him to bring her dead child back to life. The holy man, touched by the great sorrow of the poor woman said, "There is only one medicine that can restore your son to life. Bring me a handful of rice from a house where death has never taken place."

C. Cheerfulness and health go hand in hand. The healthy are cheerful and those who are cheerful are also found healthy. The singing birds fill us with pleasure. Object of nature like fountains, lakes and rivers, also produce pleasing ideas in our minds. Therefore, everything in the universe is a source of joy.

D. Our ancestors had great difficulty in obtaining books. Ours is what to select. We must be careful what be read. There are indeed, books and books, and there are books which Lamp said, are not book at all. Bacon remarked to an unfortunate author, "I will lose no time in reading your book." Others are more than useless, and poison the mind suggestions of evil. Few perhaps realise how much the happiness of life, and the formation of character depend on a wise selection of books we read.

TEST PROBLEMS : (QUESTIONS BASED ON THE ABOVE PASSAGES)

1. What did Buddha ask the woman to bring ?
A. Wood **B.** Child **C.** Rice **D.** Gold **E.** Death.

2. What request did she make a Buddha ?
A. To bless her with a child **B.** To kill her also **C.** To give her plenty of wealth
D. To make her son alive again **E.** To give life to her husband.

3. The statement, "There are book which are not book at all" means :
A. These are useful books **B.** The authors of these books are dead
C. These are not books **D.** These are holy books
E. These books contain filthy matter.

4. Where do we find the real picture of the Indian people ?
A. In the films **B.** In the nature **C.** In the hospital
D. In the villages **E.** In the cities.

5. The word 'Restore' means :
A. Birth **B.** Alive **C.** Store **D.** Chemist **E.** Bring back

6. Our fore-fathers faced difficulty in :
A. Reading books **B.** Writing Books **C.** Getting Books
D. Selling books **E.** Selecting books

7. 'The cities represent only an incomplete picture' Which word or words have been used to express an incomplete picture ?
A. Narrow **B.** Full **C.** One side of **D.** Half **E.** Ordinary people

8. The most suitable little for the forth passage 'D' is :
A. Reading of books **B.** Character and books **C.** Selection of books
D. Abundance of books **E.** An unfortunate author

STOP HERE

TEST - VI

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PASSAGES :

A. The real life of India is not in the cities; it is in the homes of the ordinary people; it is in the villages. The cities present only, one side of the picture, but the majority of the people of India live almost on the borderline of starvation.

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D. Our ancestors had great difficulty in obtaining books. Ours is what to select. We must be careful what be read. There are indeed, books and books, and there are books which Lamp said, are not book at all. Bacon remarked to an unfortunate author, "I will lose no time in reading your book." Others are more than useless, and poison the mind suggestions of evil. Few perhaps realise how much the happiness of life, and the formation of character depend on a wise selection of books we read.

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8. The most suitable little for the forth passage 'D' is :
A. Reading of books **B.** Character and books **C.** Selection of books
D. Abundance of books **E.** An unfortunate author

STOP HERE

TEST - VII

PRACTICE EXAMPLES

EXAMPLES

1.	2	4	(?)	8	10	
2.	P	(?)	R	S	T	
3.	10	11	13	16	(?)	25

EXPLANATION :

1. You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series. Here the number that has been omitted is 6. Look at the **ANSWER SHEET** for **TEST VII** (Practice Examples in the first column at the space meant for page 15 of the Booklet) against Serial Number 1, 6 is written in the bracket.
2. Mark it yourself. Against Serial Number 2, write Q in the bracket "(Q)".
3. You would observe that there is a certain order or arrangement. The increase or decrease is in a systematic manner. Look at the following :

The first number is	:	10
The second number is	:	10 plus 1 (11)
The third number is	:	11 plus 2 (13)
The fourth number is	:	13 plus 3 (16)
The fifth number is	:	16 plus 4 (20)

Mark it yourself. Against Serial Number 3, write 20 in the bracket.

FOR TEST VII, WHERE TO MARK

You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series at the space meant for **TEST VII** Problems at **BOOKLET** Page 16.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 12 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VII

PRACTICE EXAMPLES

EXAMPLES

1.	2	4	(?)	8	10	
2.	P	(?)	R	S	T	
3.	10	11	13	16	(?)	25

EXPLANATION :

1. You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series. Here the number that has been omitted is 6. Look at the **ANSWER SHEET** for **TEST VII** (Practice Examples in the first column at the space meant for page 15 of the Booklet) against Serial Number 1, 6 is written in the bracket.
2. Mark it yourself. Against Serial Number 2, write Q in the bracket "(Q)".
3. You would observe that there is a certain order or arrangement. The increase or decrease is in a systematic manner. Look at the following :

The first number is	:	10
The second number is	:	10 plus 1 (11)
The third number is	:	11 plus 2 (13)
The fourth number is	:	13 plus 3 (16)
The fifth number is	:	16 plus 4 (20)

Mark it yourself. Against Serial Number 3, write 20 in the bracket.

FOR TEST VII, WHERE TO MARK

You have to write in the bracket on the **ANSWER SHEET** the number that has been omitted from the series at the space meant for **TEST VII** Problems at **BOOKLET** Page 16.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 12 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VII

TEST PROBLEMS

1. 101 (?) 121 131 141

2. 63 56 49 (?) 35 28

3. 1 7 13 19 (?)

4. 2 9 (?) 23 30

5. 11.9 10.8 9.7 8.6 (?)

6. Z-A Y-B X-C W-D (?)

7. D H (?) P T

8. P R T V (?)

9. 119 102 85 68 (?)

10. 3 4 5 10 11 12 17 18 19 (?)

11. 1 4 2 8 3 (?) 4 16

12. 25 35 44 (?) 59

STOP HERE

TEST - VIII

PRACTICE EXAMPLES

EXAMPLES :

1. He who teachers in a school is called :
   A. Student **B.** Teacher **C.** Officer **D.** Scholar **E.** Professor
2. The saying, "Thing before you speak" means :
   A. Silence is golden.
   B. Don't speak and be quiet.
   C. Slow and steady wins the race.
   D. Think over it, after you have spoken.
   E. Before starting to speak, think over it.
3. He who steal is called :
   A. Fool **B.** Poor **C.** Clever **D.** Thief **E.** Beggar

EXPLANATION :

1. Here you have to select the best out of the five given answers. In a School, it is the Teacher who teacher. The correct answer is at 'B' Look at the **ANSWER SHEET** for **TEST VIII** (Practice Examples in the first column at the space meant for page 17 of the Booklet) against Serial Number 1, a cross is made on B.
2. The correct answer is at 'E'. Mark it yourself. Against Serial Number 2, make a cross on E.
3. Mark it yourself. You have to make a cross on D.

FOR TEST VIII, WHERE TO MARK

You have to mark on the **ANSWER SHEET** at the space meant for **TEST VIII** Problems at **BOOKLET** Page 18 and 19.

NUMBER OF PROBLEMS AND TIME-LIMIT :

You are to answer 20 Test Problems in **FOUR** Minutes.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

TEST - VIII

TEST PROBLEMS

1. He who tells a lie is called :

A. Lawyer **B.** Disobedient **C.** Honest **D.** Liar **E.** Naughty

2. He who writes book is called :

A. Teacher **B.** Publisher **C.** Scholar **D.** Author **E.** Steno

3. He who is always in time is called :

A. Punctual **B.** Optimist **C.** Lazy **D.** Serious **E.** Good

4. He who is new to a certain place in called :

A. Stranger **B.** Hawker **C.** Minister **D.** Poet **E.** Philosopher

5. One who is locked up in jail is called :

A. Constable **B.** Thief **C.** Robber **D.** Prisoner **E.** Foreigner

6. That which remains unaffected by water is called :c

A. Water Proof **B.** Umbrella **C.** Raincoat **D.** Plastic **E.** Leather

7. A woman whose husband is not alive is called :

A. Widower **B.** Unfortunate **C.** Married **D.** Window **E.** Maidan

8. He who slaughters animals is called :

A. Cruel **B.** Animal **C.** Non-vegetarian **D.** Customer **E.** Butcher

9. The saying 'A word for the wise and rod for the foolish' means :

A. All men are wise
B. Give desirable treatment to all
C. For a wise man only a hint would do, but not for the fool who is subject to punishment
D. It is no use to cry over spilt milk.
E. Fools are wiser than the wise.

10. He who does not believe in God is called :

A. Thiest **B.** Preacher **C.** Athiest **D.** Worried **E.** Prophet

GO ON TO THE NEXT PAGE

11. When we think, we

A. Dream **B.** Sing **C.** Concentrate **D.** Sit **E.** Sleep

12. He who serves in a hotel is called :

A. Cook **B.** Waiter **C.** Manager **D.** Servent **E.** Tray

13. He who ploughs the land is called :

A. Worker **B.** Landlord **C.** Labourer **D.** Villager **E.** Peasant

14. The saying 'Nip the evil in the bud' means :

A. Honesty is the best policy
B. We should avoid doing bad acts
C. Evil is in the bud
D. Nip the bud in the evil
E. To stop bad actions at the initial stage.

15. A gentleman is one who does not :

A. Go to see pictures **B.** Like others **C.** Inflict pain on others
D. Marry **E.** Steal

16. The saying 'A rolling stone gathers no moss' means :

A. We should not shirk work.
B. Moss cannot be collected by the stones.
C. We should move from place to place
D. If we keep shifting, we cannot achieve much
E. Change is the law of nature

17. The voice that can be heard is called :

A. Audible **B.** Clear **C.** Loud **D.** Visible **E.** Low

18. A child born after the death of his father is called :

A. Innocent **B.** Poor **C.** Unfortunate **D.** Postman **E.** Orphan

19. He who compiles words in the printing press is called :

A. Pressman **B.** Compositor **C.** Manager **D.** Client **E.** Builder

20. That which is hated is called :

A. Injurious **B.** Painful **C.** Disfigured
D. Contemptible **E.** Disastrous.

STOP HERE

APPENDIX- B

Sr no	Name	Class	Gender	Locale	TOI	G	G	T	I-A					
						I	II	III	IV	V	VI	VII	VIII	Total
1	Bharat	10th	M	Rural	Govt	9	7	11	2	21	3	6	10	60
2	Divyansh	10th	M	Rural	Govt	5	9	10	4	19	4	7	10	63
3	Raghav	10th	M	Rural	Govt	8	15	12	4	25	4	6	10	76
4	Pankaj	10th	M	Rural	Govt	3	5	5	1	13	1	4	4	33
5	Shivansh	10th	M	Rural	Govt	7	10	10	4	12	2	1	8	47
6	Gourav	10th	M	Rural	Govt	8	10	9	2	20	3	3	7	54
7	Ankush	10th	M	Rural	Govt	9	5	11	1	15	3	4	9	58
8	Mohit	10th	M	Rural	Govt	7	11	14	3	17	3	7	7	62
9	Ankush	10th	M	Rural	Govt	9	15	14	3	21	4	7	4	68
10	Akshat	10th	M	Rural	Govt	8	9	9	4	14	0	3	3	42
11	Priyanka	10th	F	Rural	Govt	6	4	7	3	12	5	1	10	42
12	Ananya	10th	F	Rural	Govt	9	13	8	2	12	2	8	4	49
13	Akshita	10th	F	Rural	Govt	5	10	12	1	15	3	2	9	48
14	Heena	10th	F	Rural	Govt	9	5	11	1	15	3	6	5	46
15	Sania	10th	F	Rural	Govt	9	15	12	4	13	4	5	10	53
16	Rashi	10th	F	Rural	Govt	7	10	10	3	6	3	5	8	55
17	Aditi	10th	F	Rural	Govt	9	10	10	4	17	3	9	8	61
18	Anshika	10th	F	Rural	Govt	6	10	11	4	16	4	8	8	61
19	Muskan	10th	F	Rural	Govt	9	13	14	3	15	4	6	10	65
20	Nandini	10th	F	Rural	Govt	9	11	15	4	15	5	10	10	70
21	Aastha	10th	F	Urban	Private	9	8	9	0	15	1	3	7	43
22	Nisha	10th	F	Urban	Private	9	10	14	1	15	1	7	6	54
23	Subhadra	10th	F	Urban	Private	9	10	14	1	15	1	7	6	54
24	Vaishnavi	10th	F	Urban	Private	9	13	13	4	5	3	7	7	52
25	Rashma	10th	F	Urban	Private	7	4	5	2	5	0	3	3	22
26	Shanaya	10th	F	Urban	Private	7	5	8	3	7	4	3	5	35
27	Khushmita	10th	F	Urban	Private	9	13	13	4	4	1	7	7	49
28	kanika	10th	F	Urban	Private	8	14	11	2	20	2	8	15	72
29	Palak	10th	F	Urban	Private	9	15	13	2	18	4	6	14	72
30	Harshit	10th	M	Urban	Private	8	4	5	2	5	0	11	3	30
31	Deepak	10th	M	Urban	Private	8	7	11	3	7	0	11	5	44

32	Manish	10th	M	Urban	Private	8	8	12	2	10	1	5	5	43
33	Udit	10th	M	Urban	Private	8	11	12	1	9	6	7	2	48
34	Gaurav	10th	M	Urban	Private	8	12	11	1	16	2	7	3	52
35	Ishant	10th	M	Urban	Private	4	13	14	4	16	5	9	9	50
36	Kshitiz	10th	M	Urban	Private	8	11	12	1	15	6	7	7	59
37	Naman	10th	M	Urban	Private	9	11	10	3	15	1	12	5	57
38	Suryansh	10th	M	Urban	Private	9	12	11	3	10	4	11	6	57
39	Yogwsh	10th	M	Urban	Private	8	13	10	3	21	4	10	7	68
40	Shiven	10th	M	Urban	Private	9	13	17	4	16	5	7	10	72
41	Kanika	10th	F	Urban	Private	5	10	9	1	11	3	2	7	43
42	Jiya	10th	F	Urban	Private	8	12	11	2	16	5	3	12	61
43	Shagun	10th	F	Urban	Private	9	15	15	1	22	7	3	11	74
44	Rashi	10th	F	Urban	Private	8	15	12	3	21	5	10	12	78
45	Harshita	10th	F	Urban	Private	8	13	12	2	21	4	8	15	75
46	Mannat	10th	F	Urban	Private	9	15	11	4	26	6	6	15	83
47	Prisha	10th	F	Urban	Private	7	13	13	4	27	6	7	12	82
48	Devanshi	10th	F	Urban	Private	8	15	15	4	19	3	10	15	81
49	Apurva	10th	F	Urban	Private	9	9	13	5	26	8	10	15	81
50	Aastha	10th	F	Urban	Private	9	16	15	4	25	8	6	13	87
51	Eshita	10th	F	Urban	Private	9	14	12	3	24	7	11	7	88
52	Karan	10th	M	Urban	Private	6	17	15	3	19	5	7	8	74
53	Arnav	10th	M	Urban	Private	9	13	15	4	16	5	7	12	72
54	Anuj	10th	M	Urban	Private	9	15	18	5	15	7	11	13	84
55	Ishan	10th	M	Urban	Private	9	15	11	4	21	6	7	16	80
56	Divyam	10th	M	Urban	Private	9	15	14	4	21	7	8	15	80
57	Shubham	10th	M	Urban	Private	9	16	17	4	20	7	12	9	85
58	Prince	10th	M	Urban	Private	9	15	16	5	25	7	11	14	93
59	Shourya	10th	M	Urban	Private	9	16	17	4	20	7	12	15	91
60	Vinayak	10th	M	Urban	Private	9	16	18	4	26	7	11	15	97
61	Akanksha	10th	F	Urban	Private	7	11	13	4	22	4	7	10	71
62	Sarika	10th	F	Urban	Private	9	10	12	3	20	4	10	15	74
63	Shagun	10th	F	Urban	Private	9	15	17	4	20	8	7	16	77
64	Shagun	10th	F	Urban	Private	9	16	15	4	20	6	8	15	84

65	Mehak	10th	F	Urban	Private	8	15	15	4	20	5	9	13	81
66	Kashish	10th	F	Urban	Private	9	16	16	4	22	7	8	13	86
67	Subhangi	10th	F	Urban	Private	9	12	16	3	25	6	11	15	90
68	Deepika	10th	F	Urban	Private	9	17	18	4	23	7	10	15	94
69	Banoma	10th	F	Urban	Private	8	15	17	4	27	8	10	16	97
70	Mannat	10th	F	Urban	Private	9	19	18	6	24	8	11	17	103
71	Akshal	10th	M	Urban	Private	9	12	12	4	19	5	8	16	76
72	Shlok	10th	M	Urban	Private	9	14	14	4	17	4	7	8	68
73	Shivam	10th	M	Urban	Private	4	10	7	3	20	4	4	10	54
74	Harshit	10th	M	Urban	Private	8	10	12	6	15	4	8	12	67
75	Shubham	10th	M	Urban	Private	6	11	14	5	13	7	8	15	73
76	Satvik	10th	M	Urban	Private	9	14	10	4	21	6	9	17	81
77	Aayush	10th	M	Urban	Private	8	16	17	3	22	6	11	17	92
78	Shivam	10th	M	Urban	Private	9	16	15	6	24	5	11	15	92
79	Parv	10th	M	Urban	Private	9	17	16	5	24	5	10	14	91
80	Kartik	10th	M	Urban	Private	9	15	17	3	24	7	10	15	91
81	Ishita	10th	F	Urban	Govt	9	16	14	3	21	4	8	11	77
82	Kashish	10th	F	Urban	Govt	8	14	10	4	20	6	12	12	78
83	Kashish	10th	F	Urban	Govt	8	11	13	4	21	7	12	12	70
84	Rachana	10th	F	Urban	Govt	8	12	13	3	18	5	9	11	71
85	Anchal	10th	F	Urban	Govt	9	11	10	3	18	4	9	10	65
86	Komal	10th	F	Urban	Govt	7	15	13	3	20	4	9	12	76
87	Muskan	10th	F	Urban	Govt	7	14	14	3	25	4	8	14	82
88	Priya	10th	F	Urban	Govt	7	13	17	5	20	5	10	11	81
89	Mehak	10th	F	Urban	Govt	7	13	15	4	25	5	10	16	88
90	Vanita	10th	F	Urban	Govt	9	10	12	4	20	4	9	10	69
91	Shubham	10th	M	Urban	Govt	4	6	11	2	10	2	4	6	41
92	Ajay	10th	M	Urban	Govt	7	6	9	3	15	5	7	10	55
93	Anshuman	10th	M	Urban	Govt	2	10	10	3	19	4	7	10	63
94	Parveen	10th	M	Urban	Govt	7	11	10	4	19	4	9	8	65
95	Aryan	10th	M	Urban	Govt	6	11	11	4	21	5	10	12	74
96	Ansh	10th	M	Urban	Govt	7	10	12	4	20	5	7	13	71
97	Bharat	10th	M	Urban	Govt	5	10	12	4	22	5	8	10	71
98	Akshat	10th	M	Urban	Govt	5	11	12	5	17	5	8	12	70
99	Aman	10th	M	Urban	Govt	8	11	12	5	24	5	9	10	76
100	Aryan	10th	M	Urban	Govt	9	15	14	5	23	6	9	11	83