

**ACHIEVEMENT MOTIVATION, ATTITUDE TOWARDS MALAYALAM
AND SOME SOCIAL-FAMILIAL VARIABLES DIFFERENTIATING
BETWEEN HIGH-, AND LOW-CREATIVE UNDERACHIEVERS
IN MALAYALAM AMONG SECONDARY SCHOOL
PUPILS OF KERALA**

E. S. RAMESAN

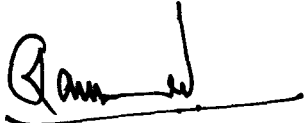
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DECLARATION

I, E.S. Ramesan, do hereby declare that this thesis, "ACHIEVEMENT MOTIVATION, ATTITUDE TOWARDS MALAYALAM AND SOME SOCIAL-FAMILIAL VARIABLES DIFFERENTIATING BETWEEN HIGH- AND LOW- CREATIVE UNDERACHIEVERS IN MALAYALAM AMONG SECONDARY SCHOOL PUPILS OF KERALA" has not been submitted for the award of a Degree, Diploma, Title or Recognition before.

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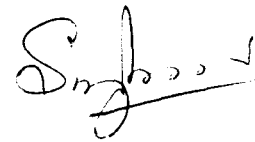

E.S. RAMESAN

Dr. (Mrs.) V. Sumangala
Reader
Department of Education
University of Calicut

Calicut University Campus,
03-04-2000.

C E R T I F I C A T E

I, Dr. (Mrs.) V. Sumangala, do hereby certify that this dissertation entitled "ACHIEVEMENT MOTIVATION, ATTITUDE TOWARDS MALAYALAM AND SOME SOCIAL-FAMILIAL VARIABLES DIFFERENTIATING BETWEEN HIGH-, AND LOW-CREATIVE UNDERACHIEVERS IN MALAYALAM AMONG SECONDARY SCHOOL PUPILS OF KERALA" is a record of bonafide study and research carried out by Sri. E.S. Ramesan under my supervision and guidance.



DR. (Mrs.) V. SUMANGALA
(Supervising Teacher)

ACKNOWLEDGEMENT

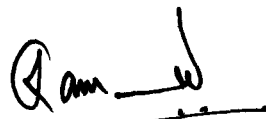
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E.S. RAMESAN

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INTRODUCTION

E. S. Ramesan “Achievement motivation, attitude towards malayalam and some social-familial varlables differentiating between high-, and low-creative underachievers in Malayalam among secondary school pupils of Kerala”
Thesis. Department of Education , University of Calicut, 2000

INTRODUCTION

Need and Significance of the Study
Statement of the Problem
Definition of Key Terms
Variables
Hypotheses
Objectives
Methodology
Scope of the Study
Limitations of the Study
Organisation of the Report

INTRODUCTION

Education is a planned developmental process. It aims at the development of the individual as well as of the nation. As such the innate potentialities of every child has to be developed to its optimum level for a better life of his own and for a better future of the nation.

The developed human resource is the greatest asset of a nation. The destiny of the nation depends upon the effective and scientific utilisation of this developed human resources according to its needs. The development of the individual and its conversion to the development of the nation, will not take place naturally but through the process of a scientifically planned and well implemented educational programme of the nation, which should essentially be the part and parcel of nations general planning. Thus education of a generation stepping towards the new millennium which is absolutely the age of science and technology is quite critical.

The very existence and survival of the generation almost depends upon the pains we take to a giant leap towards the advancement in the area of science and technology. Creativity being the vital force behind the scientific and technological advancement, it is to be properly developed to the fullest in every individual. That is nurturing creative capacity of the generation becomes an inevitable task of the educational process of the country.

But as far as school teachers and our formal system of education are concerned the immediate target of education is still clustered around the students achievement in school subjects. And even in that process low performance by high ability students termed 'underachievement' is often seen unnoticed and unstudied. This phenomenon of low performance of a set of pupils below their expected level of performance remains a crucial problem of study and rectification to educationists and to parents. As the extent of underachievement can be taken as an index of potential wastage, this phenomenon has gained serious attention of educational researchers since several of the past decades.

The question of nurturing creativity on one hand and reducing underachievement of high ability students in school subjects on the other hand naturally provoked the investigator being a man of reason in the field of education. This opened a channel of thoughts on the school experiences of the noted creative personalities of the world. We know that Winston Churchill, Mark Twain, William Farknere, Hemingway, Edison and Albert Einstein were scholastically low achievers, but they became noted personalities because of their high creativity. The famous scientist Albert Einstein's headmaster told his father in his school years that Albert would never make success at any thing; Albert was even expelled from school with the admonition "your presence in the class is disruptive and affects the other students" (Clerk, 1971).

The above cases of creative personalities were cited only to bring to light the fact that underachievers should never be underestimated. Among underachievers, there may be gifted children with high level of creative potential with which they can develop to their fullest if such creative potential are identified and nurtured at the right time.

1.1 NEED AND SIGNIFICANCE OF THE STUDY

The role of education and creativity in making an individual unique is widely accepted. It is well established beyond doubt that creativity is the major strength behind originating novel ideas, making discoveries, inventions, artistic work etc. But in the actual practice it is seen that many of the creative students do not get enough opportunity for developing their creative talents. They are therefore brought to the level of low achievers or underachievers and are often ignored and ill-treated by the teachers. Thus it is found that many of the underachievers are often pupils with genuine creative talents.

However, modern researchers in the field of education and psychology have found considerable linkage between creative performance and academic underachievement among secondary school students. This trend seen among secondary school pupils motivated the investigator to study the following.

- (i) The extent of underachievement in the school subject Malayalam (the investigator being a person of specialist in Malayalam and of Language Education), and to compare it with that of over-, and normal achievement in the subject.
- (ii) Among underachievers in Malayalam, how far are pupils with high and low creative talents?
- (iii) What is the chance of a creative person becoming an underachiever?

Underachievement is a crucial area of study as it is the phenomenon of not achieving up to the expected level based on the level of ability. A review of studies in the area of underachievement revealed that enough studies were conducted involving underachievement and intelligence (Thorndike, 1963; Burt, 1966 and Klein 1984); underachievement and personality factors (Dhaliwal, 1971; Mathew, 1975 and Sathyanarayana, 1978) and underachievement and social familial variables (Sreevasthava, 1967; Abraham, 1975; Nair, 1980 and Cherian, 1984). But studies linking underachievement and creativity are scanty.

If high achievement is our priority or aims, then underachievement is to be minimised to the least. Among the available studies, factors associated with underachievement in language are very rare. Underachievement, whether it be in science or in language can retard considerably the economical and social progress of a nation. If so, the loss

of the nation due to the underachievement of creative students is a matter of grave concern. This was a matter of major concern for conducting the study on High Creative and Low Creative Underachievers in Malayalam.

Recent literature on gifted pupils suggests that gifted children are those pupils with high intelligence, high creativity and having a satisfactory level of achievement motivation. That is, motivation has a significant role in making an intelligent, creative one to achieve high in academic subjects and hence in life. Thus the literature suggested that it is imperative to know whether achievement motivation is different between High Creative Underachievers and Low Creative Underachievers in Malayalam.

Vast number of studies resulted in the finding that attitude towards Malayalam (a school subject) has significant effect on the achievement in Malayalam (the same subject of study). That is positive affect towards subjects of studies contribute to high academic achievements. This being the case of the relation of attitude with achievement, it became of interest to know what will be the role of attitude in underachievement and especially among creative and noncreative underachievers?

If the creative potential of pupils are to be tapped of fully, it becomes necessary that creative pupils are to be identified from every group -- even from underachievers. Studies conducted in the past

revealed that creatives can be identified from their cognitive, affective and social-familial or environmental characteristics. Hence it becomes an area of interest to study whether creative underachievers can be identified from their cognitive, affective or social familial characteristics. As a number of studies and a good amount of literature are there on the cognitive and affective characteristics, the investigator wished to concentrate on social-familial characteristics along with two of the affective variables. That is to know whether Achievement Motivation and Attitude Towards Malayalam are significantly different for High and Low Creative Underachievers and to know what are the social familial variables linked or differentiating between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam.

1.2. STATEMENT OF THE PROBLEM

The problem is entitled "ACHIEVEMENT MOTIVATION, ATTITUDE TOWARDS MALAYALAM AND SOME SOCIAL-FAMILIAL VARIABLES DIFFERENTIATING BETWEEN HIGH-, AND LOW CREATIVE UNDERACHIEVERS IN MALAYALAM AMONG SECONDARY SCHOOL PUPILS OF KERALA."

1.3. DEFINITION OF KEY TERMS

The key terms used in the statement of the problem are defined below for a better conception of the operational nature of the problem.

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1.3.1. Achievement Motivation

This psychological construct is defined by Good (1973) as “a combination of psychological forces which initiates, directs and sustains behaviour toward successful attainment of some goal which provides a sense of significance.”

1.3.2. Attitude towards Malayalam

The term ‘Attitude towards Malayalam’ stands for the valance to or reaction tendencies to certain sequences of behaviour to the subject Malayalam.: That is, the term suggests an individual’s positive or negative affect towards the academic subject of study, Malayalam.

1.3.3. Social-Familial Variables

The term social-familial variables refers to the characteristics which have link with both family and society, like parental education level, parental occupation level, parental income level, socio-economic status, home learning facility, etc.

1.3.4. Differentiating

In the study the term stands for statistical differentiation using relevant techniques of hypothesis testing between defined groups of the study.

1.3.5. High and Low Creative Underachievers in Malayalam

1. Students who score in a test of Achievement in Malayalam below the expected level of performance, the expected level being predicted on the basis of scores on a test of intelligence are the Underachievers in Malayalam.

2. Underachievers in Malayalam who fall above the median score on a standardised test of creativity are the High Creative Underachievers in Malayalam (HCUA).

3. Underachievers in Malayalam who score below the median on the same standardised test of creativity are the Low Creative Underachievers in Malayalam (LCUA).

1.3.6. Secondary School Pupils

The term denotes pupils attending classes VIII, IX and X of the recognised schools of Kerala. But for the study the term stands for Standard IX pupils as representative of the classes VIII, IX and X.

1.4. VARIABLES OF THE STUDY

The nature of the study warranted the use of two types of variables viz. criterion variables and predictor variables. Details are given below.

1.4.1. Criterion Variables

As the investigator was interested in identifying the discriminating variables between High and Low Creative Underachievers in Malayalam, the study was designed with the following as criterion variables to locate and classify the two groups.

1. Intelligence (Verbal and Non Verbal)
2. Achievement in Malayalam
3. Creativity

1.4.2. Predictor Variables

The selected predictor variables to test for discrimination between High and Low Creative Underachievers are the following.

- i) Achievement Motivation
- ii) Attitude towards Malayalam
- iii) Home Learning Facility
- iv) Family Acceptance of Education
- v) Family Cultural Level
- vi) Family Environmental Index
- vii) Social-Familial Index
- viii) Parental Education level
- ix) Parental Occupation level
- x) Parental Income level

- xi) Socio-Economic Status
- xii) Family Size
- xiii) Birth Order

1.5. HYPOTHESES

The study was designed with the major hypothesis that each select predictor variable will discriminate significantly between High Creative and Low Creative Underachievers in Malayalam.

The investigator has also set the following sub hypotheses the testing of each of which evidences the above major hypotheses. The sub hypotheses are:

1. The mean scores of the select predictor variables will be significantly different between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam.
2. The predictor variables will have significant relationship with
 - (i) Creativity
 - (ii) Achievement in Malayalam
3. The factor structures of HCUA and LCUA will be different in terms of
 - (i) Number of factors
 - (ii) Presence or absence of the input predictor variables in the factors
 - (iii) Percentage of variance accounted for by the factors.

4. Different combination of predictor variables exists by which groups HCUA and LCUA differ.

1.6. OBJECTIVES

The hypotheses stated above led the investigator to fix the objectives of the study as follows:

1. To compare the mean scores of the select predictor variables between HCUA and LCUA in Malayalam.
2. To estimate the nature and extent of relationship of Creativity and Achievement in Malayalam with each of Achievement Motivation, Attitude towards Malayalam and the select social familial variables.
3. To derive and compare the factor structure of High and Low Creative Underachievers in Malayalam.
4. To know the combination of predictor variables which help to discriminate between groups HCUA and LCUA in Malayalam.

1.7. METHODOLOGY

1.7.1. Sample

The study was conducted on a final sample of 715 secondary school pupils of Kerala selected by stratified sampling technique giving due representation to factors like gender, school locale, type of school management and level of school efficiency.

1.7.2. Tools

The investigator used available tools having satisfactory psychometric indices for all the select variables except in the case of the variable Attitude towards Malayalam. The tool for measuring Attitude towards Malayalam was developed and standardised by the investigator in collaboration with his supervising teacher.

The tools used were,

1. Kerala University Group Test of Verbal Intelligence (Pillai, 1968).
2. Calicut University Letter Matrices Test of Intelligence (Nair, 1984).
3. Generalised Test of Achievement in Malayalam for Secondary School Pupils of Kerala (Kelu and Sainudeen, 1987).
4. Verbal Part of the Comprehensive Test of Creativity for Secondary School Pupils (Sumangala, 1987).
5. Kerala Scale of Achievement Motivation (Nair, 1980).
6. Scale of Attitude towards Malayalam (Sumangala and Ramesan, 1991)
7. Social-Familial Inventory (Nair and Devi , 1982).
8. Kerala Socio Economic Scale (Modified) (Nair, 1980).

1.7.3. Statistical Techniques Used

1. Two-tailed test of significance of difference between mean scores of large independent samples.

2. Pearson's Product Moment Coefficient of Correlation
3. The 't' test of significance of correlation.
4. Principal Components Factor Analysis followed by Varimax Rotation.
5. Discriminant Function Analysis (Direct Method).

1.7.4. Identification of High Creative and Low Creative Underachievers in Malayalam (HCUA and LCUA)

At first underachievers in Malayalam were located from the whole sample of subjects by regression analysis procedure taking intelligence (verbal and nonverbal) as the criterion variable. The group of underachievers in Malayalam were then classified into two groups - High Creative Underachievers and Low Creative Underachievers, using Median score of creativity as the cut off point between the two groups. That is High Creative Underachievers (HCUA) are the Underachievers in Malayalam who score above the Median score in the test of creativity and Low Creative Underachievers (LCUA) are those Underachievers in Malayalam who score below the Median score in the test of creativity.

1.8. SCOPE OF THE STUDY

The descriptions so far narrated are adequate to convey the scope of the study. However an attempt is made here to examine the scope.

1. This is a study to identify the predictor variables which are helpful to distinguish between High Creative and Low Creative Underachievers in Malayalam. A review of the studies done in the area revealed that there is no study of this type that is by taking the criterion groups as High Creative and Low Creative Underachievers in Malayalam. The investigator therefore hopes that this study will set start of more and more studies in the area.
2. Considering the importance of fostering creativity and reducing the rate of underachievement, the investigator hopes that the findings and implications noted in the study deserve special attention.
3. There are thirteen predictor variables to test for knowing in how much variables HCUA and LCUA differ. If significant difference is found in majority of the variables it is considered as an indication that HCUA and LCUA are highly independent groups and this independence is due to the level of creativity found among pupils. That is both creativity and the predictor variables have significant role in discriminating between HCUA and LCUA. This findings will be of immense value to the educationists, psychologists, and to teachers.
4. The major hypothesis of the study is tested by means of five major statistical techniques, viz.

- (i) Two-tailed 't' test for independent samples.
- (ii) Pearson's product moment coefficient of correlation
- (iii) The 't' test of significance of correlation
- (iv) Principal Component factor analysis followed by Varimax Rotation.
- (v) Discriminant function analysis.

As such, the investigator hopes that the findings of the study will be highly valid.

5. The study was conducted using many of the available standardised tools (only one, the Scale of Attitude towards Malayalam - was developed by the investigator for the study). Therefore, there is a scope for conducting studies of this nature by using more and more newly constructed and standardised tools which will be highly valid to the present psychological level of secondary school pupils.
6. The sample for the study is a representative group of secondary school children selected through stratified techniques from 19 schools of Malappuram, Trichur, Ernakulam and Idukki districts. By this, it can be hoped that the findings of the study are valid and generalisable to a considerable extent.

1.9. LIMITATIONS OF THE STUDY

Even though every attempt has made to make the study as precise and objective as possible, there are certain limitations. The following are the limitations.

1. The study was not conducted on a statewide sample, but confined only to four districts of Kerala. viz. Malappuram, Trichur, Ernakulam and Idukki. The finance and other practical inconvenience restricted the investigator from selecting state wide sample.
2. Due to practical difficulties the study has to be confined to one level of secondary class, viz., Standard IX as Standard IX reasonably represent classes VIII, IX and X.
3. The variables or factors which are helpful to discriminate high creatives and low creatives among underachievers may come under different dimensions like Personal, Environmental, Cultural etc. which are very large in number. Among these the investigator selected only 13 variables belonging to two dimensions. The investigator consider this as a limitation.

In spite of the few aforesaid limitations the investigator hopes that the findings of the present study will be helpful in locating High Creative and Low Creative Underachievers in Malayalam based on their

Attitudinal, Motivational and Social Familial background. This is helpful to the teachers to do their best in developing creativity as well as achievement of their students.. More over the study can be used as a basis for more adequate and extensive researches of this type.

1.10. ORGANISATION OF THE REPORT

The report is presented in five chapters.

The first chapter presents a rationale for selecting the present problem, its need and significance, statement of the problem, operational definitions of the key terms, variables of the study, hypotheses, objectives, methodology, scope and limitations of the study.

In Chapter II, the investigator has given a summary of the reviewed related literature regarding the variables used in the study and a trend report of the related studies.

Chapter III contain the methodology of the study. This covers a discussion of the nature of the variables, tools employed for the collection of data, selection of the sample, administration of tools consolidation of the data and statistical procedure used for analysis.

Chapter IV presents the details of analysis of data taken up in the order of objectives of the study. The analysis is followed by an

interpretation of the major results and a discussion of the tenability of the hypotheses.

The last chapter V contains major findings of the study, suggestions for improving educational practices and suggestions for further research in the area.

RELATED LITERATURE: A REVIEW

E. S. Ramesan “Achievement motivation, attitude towards Malayalam and some social-familial variables differentiating between high-, and low-creative underachievers in Malayalam among secondary school pupils of Kerala”
Thesis. Department of Education , University of Calicut, 2000

CHAPTER II

RELATED LITERATURE : A REVIEW

|| Theoretical Construct of the Variables

|| Review of the Empirical Studies in the Area

RELATED LITERATURE: A REVIEW

As the major objective of the study is to identify the differentiating variables between High and Low Creative Underachievers in Malayalam among Secondary School Pupils from a select set of predictor variables consisting of Achievement Motivation, Attitude towards Malayalam and Some Social Familial Variables, the investigator presents, the reviewed literature under two headings, viz.,

- (i) Theoretical Construct of the Variables used
- (ii) Review of the empirical studies in the area.

Literature on each of the above follows:

2.1. THEORETICAL CONSTRUCT OF THE VARIABLES

In this section the investigator wishes to give a brief account of the nature of the variables incorporating some definitions also. These are presented in the same order as the variables are listed for the study, given in the previous chapter.

2.1.1. Achievement in Malayalam

Even though in the study Achievement in Malayalam is the second criterion variable, the investigator gives an idea of underachievement, as the study is to compare High Creative and Low Creative Underachievers in Malayalam.

Underachievement : Meaning

Earlier, the term 'underachievement' was used in a narrow sense as the low scholastic performance of high ability students, excluding the average or below average ability students from the class. But contemporary educational researchers use the term in a broader sense. It includes subjects of all ability level. For any ability level, if a person achieves below what is expected of him on the basis of his ability (Intelligence) he is termed as an underachiever.

According to Fliegler (1957) an underachiever is a student who does not 'appear to be functioning academically upto his assessed ability as determined by an individual intelligence test. In other words, an underachiever is one whose achievement is significantly less than what he is really capable of achieving by virtue of his intelligence.

It is assumed that intelligence is the major (or only) determinant of achievement. An underachiever according to Tolor (1969) is a child who has (a) at least average current intellectual functioning, and (b) a placement on a standard achievement test of at least one standard error of estimate expectancy, based on his own IQ.

There are many causes of underachievement. The factors causing underachievement can be classified into different categories like cognitive, affective, social, familial, environmental and so on. According to

psychologists low study motivation, low sense of responsibility, low dominance, low self confidence, low capacity to work under pressure, not able to get goals for themselves about their study are some of the factors causing underachievement.

In order to fully understand the concept as well as the process of academic achievement, it is imperative to identify and explore various factors related to academic achievement. The major studies conducted in this area have been reviewed with this objective and are presented in the same chapter.

2.1.2. Creativity

The term creativity has a long history of use in English language. But it became dominant in psychological literature only in early 50's. Webster's New Collegiate Dictionary (1973) defined the term as 'the quality of being 'Creative' or the ability to create.'

In the past, the term creativity has carried with it an aura of exclusiveness. Creative people were thought to be geniuses who possessed some rare innate qualities that raised them above the non-creative mass of humanity. But the most important feature of recent research is that creativity is a basic ability of all human beings. All persons to a certain degree potential are creative. Contrary to the long held idea that it is a divine gift, it is now accepted that creativity exists in every

sphere of human activity. The term now is used in the sense of 'Originality, progressiveness' 'novelty' or indeed to describe anything that deviate from the norm.

Major conception of creativity may be classified according to the relative emphasis placed on the product, the process or the experience of creativity. Some definitions are formulated in terms of a novel and useful manifest product. Other definitions are formulated in terms of an underlying process. Still other definitions are formulated in terms of subjective experience.

The study of creativity by means of product sense quite natural. There is very little we can know about any one, whether creative or not, unless he does or says something. Dettan and Havinghurst (1963) after reviewing a variety of definitions of creativity state that 'Creativity is the quality which leads to the production of something new and desirable. The new product may be new to society or merely new for the individual who create it.'

Rogers (1970) defined creativity "as emergence in action of a novel product, growing out of uniqueness of the individual on the one hand and the material, events, people or circumstances of his life on the other."

The Psychologists lay stress on the process working within the Psyche of the creator. Torrance (1969) defined creative thinking as the

“process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies and so on, identifying to difficulty, searching for new solutions, making guesses or formulating hypotheses about deficiencies, testing and retesting and these hypotheses and possibly modifying and retesting them, and finally communicating results.”

Yamamoto (1964) defined creativity as “the process of forming new ideas or hypothesis, testing these ideas or hypothesis and communicating the results.”

The complexity of creativity thus makes it almost impossible to have a universally acceptable definition.

After considering the various factors closely connected with the process, Jones (1972) arrived at a working definition of creativity which states “creativity is a combination of flexibility, originality and sensitivity to ideas which enables the thinker to break away from usual sequences of thoughts into different and productive sequences, the result of which gives satisfaction to himself and possibly to others.

A number of educationists support the view that the environmental factors are of supreme importance to creativity. Creativeness is not a single factor, but rather a collection of different abilities, every single one

of which can be possessed in different degrees by every individual. Research on creativity reveals that while personality and other personal factors like abilities, attitudinal, dispositions and tendencies have been studied in relation with creativity, there is a general paucity of studies on environmental factors conducive to the development of creativity.

2.1.3. Achievement Motivation

Achievement Motivation also called need for achievement is an extended person-intrinsic motivation as into reinforcement is delayed and arises from an interaction within the person.

Good (1973) defines achievement motivation "as a combination of psychological forces which initiates, directs and sustain behaviour toward successful attainment of some goal which provides a sense of significance. No single measurable factor seems to account for it; measurement is in terms of construct validation of interrelated scholastic, social and individual factors."

A person who aspires to better himself or to achieve financial, social or academic success above that which he has achieved to take will be, satisfied only when his achievements come up to the goals he has set, regardless of how others view his achievements. Success in these attempt raises his self esteem while failures leads to feelings of inadequacy.

The attitude to achieve is important than the achievement themselves. The need to achieve becomes part of an individual's personality and affects that person's behaviour in every face of life including education.

2.1.4. Attitude towards Malayalam

Attitude is a readiness to react toward or against some situation, person, or thing in a particular manner. Attitudes are positive or negative feelings that an individual hold about subjects, persons, or ideas and are generally regarded as enduring through modifiable experiences and/or persuasion and as learned rather than innate. Attitudes are also seen as predisposition to actions.

According to Allport (1935) attitudes are mental or natural state of readiness; organised through experiences upon the individual's response to all objects and situation with which it is related.

An attitude is a dispositional readiness to respond to certain situations, person, or objects in a consistent manner which has been learned and has become one's typical mode of response. An attitude has a well defined object of reference. The degree of strength of a person's attitude may vary from extremely positive through a gradation to extremely negative. Since attitudes are learned and learning presumably is

what goes on in schools, study of attitudes are of extreme importance to education (Patel, 1984; Sudha, 1985; Pillai, 1987; Sreemanunny, 1987; Naushad, 1989; Varghese, 1989; Sudheer, 1990; Madhavan, 1990; Jayasree, 1991; Rajani, 1991; Tocci & Engel Hard, 1991 and Sreelatha Amma, 1992).

Many research studies have shown that attitude towards a school subject is a best predictor of Achievement in that subject. As such Attitude towards Malayalam will be a best predictor of Achievement in Malayalam.

2.1.5. Socio-Economic Status

The term Socio Economic Status denotes the status of the social class in which he/she is a member. By the term social class, it means a category or grouping of people according to economic, occupational or social status. Traditionally society was divided into upper, middle and working (lower) classes according to the socio-economic grouping.

When people from the same social class meet and converse they soon find they have much in common, even though they may have come from different ethnic or religious backgrounds or from different sections of the country. They will find that they live in much the same kinds of neighbour hoods, have similar eating habits, dress in much the same ways, have similar tastes in furniture, literature and recreation and have about the same amount of education.

2.2. REVIEW OF THE EMPIRICAL STUDIES

This section of the chapter is devoted for reporting studies related to the area of Creativity and Underachievement.

The reviewed studies have been classified and presented under the headings, viz.,

- A. Achievement Motivation and Creativity
- B. Attitude towards Malayalam and Creativity
- C. Social Familial Variables and Creativity
- D. Achievement Motivation and Underachievement
- E. Attitude towards School subject and Underachievement
- F. Social Familial Variables and Underachievement

Even though a good number of studies have been done on the relation of Creativity with Achievement both in west and in India, the investigator couldn't locate any study on the relation of creativity with underachievement in any of the academic subject. Thus the investigator is unable to incorporate a section of reviewed studies on the relation of Creativity with Underachievement in Malayalam.

Similar is the case of the relation of the variable Attitude towards Malayalam with either Creativity or with Underachievement in

Malayalam. This may be of the fact that Attitude towards Malayalam is a peculiar variable, an affective characteristic of the Kerala pupils.

2.2.1. Achievement Motivation And Creativity

Relatively few studies have been conducted to study the association between Achievement Motivation and Creativity. Some of these studies have been abstracted below:

Torrance (1973) studied "career pattern and peak creative achievement of creative high school students twelve years later" The result of the study indicated that high creative students preferred unusual occupations.

Kumar and Raina (1976) in their study on 9th graders noted that creativity and intelligence have a significant influence on achievement motivation.

Singh and Mehra (1981) conducted a study to find out the relationships and differences between High Verbal Creative (N = 23) and Low Verbal Creative (N = 19) with respect to educational and career aspirations. They found that high verbal creatives show unconventional desires for their career and educational aspiration whereas low verbal creatives tend to be more conventional in their professional choice; aspire to achieve higher academic degrees and set their goals unrealistically.

Devi (1984) in her study obtained a very low positive correlation whereas Sumangala (1986) in her study found a significant positive relation between creativity and Achievement Motivation.

Nair (1987) in a study on Creative and Non Creative Underachievers in Science found Achievement Motivation as capable of discriminating between Creative and Non-Creative Underachievers in Science.

Ford, Donna, Y (1992) in a study explored the Social, Psychological, and Cultural determinants of underachievement as perceived, by 148 intermediate grade African American Students in gifted, above average or average academic programmes. It was found that psychological factors played the greatest role in underachievement or poor achievement motivation.

2.2.2. Social Familial Variables and Creativity

The present section deals with studies which explore the association between creativity and a number of social familial variables like parental education level, , parental occupation level, parental income level, socio economic status, cultural background, home environment, etc. The studies are reported below.

Gatzels and Jackson (1961) studied the family background of creative children and found that parents of the high IQ adolescents to be more vigilant over their child's performance in school, than are the parents of highly creative adolescents. The parents of the creative children were seem to be more concerned with their child's openness to experience, his values and intents.

The influence of the sociological variables on creativity has been studied by different researchers. The well-known Getzels and Jackson (1962) study found that the occupational status of 29 per cent of the fathers in the creative group has been reported to be university teaching, research or editing, while the number of such fathers in the intelligence group is higher than 60 per cent. Again it was found that the parents of the high-IQ children seemed to have some what higher educational status than parents of the high creative children.

Torrance (1963) in a study found middle class youngsters to be more creative on verbal tasks than lower class youngsters. Schachter (1965) also found that eminent men usually come from middle class families.

Since culture has an important role in the development of creativity, variations of creativity with variations in cultural background have been studied by researchers. Lembright and Yamamoto (1965) in their study of the influence of culture on creativity found little tendency either on the

part of a group of Spanish children or on the part of a group of American children to excel each other in creativity at grade four. But at grade six, they observed that the American group outscore their Spanish counterparts in flexibility originality and total creativity.

Dauw's (1966) study revealed that the parents of high creative pupils had better educational background and held more professional and managerial occupations than parents of the low creative pupils.

Singh (1967) in a study found that creative thinking tends to increase with socio-economic status of pupils. Olive (1972) also found that there is a tendency for father education to be quite strongly correlated with measures of creativity.

Raina (1967) observed that a prime factor in personal growth which contributes to creativity is a warm mother-child relationship.

Wallach (1968) Janssen (1969) and Torrance (1970) studied the development of creative thinking of bilingual children, presumably with dual cultural influences on their growth. They found that the bilingual experience seems to result in the development of greater potential of creativity, apparently because the dual linguistic or cultural experience provides the individual with varied views of the world, a more flexible, approach to problems and encouragement to express himself in several ways.

Smith (1970), Jaine (1974), Sebald and White (1980) and Cohen (1987) in their studies found that difference do exist between parental education and achievement motivation among adolescents.

In a cross cultural study of creative development Torrance (1973) has stated that cultural factors strongly influence the course of creative development, the level of creative functioning and the type of creative functioning that flourishes most.

Srivastava (1977) studied the influence of parental education, occupation and income on creativity scores. The study revealed that (i) children of high educated parents scored significantly higher than the children of less educated parents in creativity, (ii) students belonging to urbanised agricultural occupation group are significantly higher in creativity than students belonging to labour service and business group. (iii) Students belonging to high income groups are significantly higher in creativity as compared to middle and low income groups.

Singh (1977) found high creative student teachers to have better family background than low-creative student teachers.

Mehdi (1977) observed that culture has a significant effect on the level of creativity.

Ahmed and Joshi (1977) studied the impact of socio cultural disadvantages on non-verbal creative thinking ability of 120 students belonging to advantaged/disadvantaged home background. The study revealed that home background played a relatively significant role in the case of students attending extremely advantaged and extremely disadvantaged schools. But the role of home was found to be relatively dominant when slightly advantaged and slightly disadvantaged school subjects were compared.

Billings (1977) made an attempt to isolate home-environment variables (the amount of media, the extent of usage of these materials) etc. that appear to be correlated with creative fluency, flexibility, originality and elaboration. The study found that:

- (i) Creative fluency, flexibility, originality and composite thinking are significantly influenced by quantity and quality of media in the home.
- (ii) Creative elaboration is significantly correlated with child's usage of print materials.
- (iii) Ideational fluency is influenced by the interaction of the child's access to non-print materials—hours of usage of non-print, appropriateness of non-print—and IQ.

- (iv) Creative flexibility is significantly influenced specifically by child's access to print, IQ and hours of usage of non-print materials.

Vijayalakshmi (1978) in her study revealed that high creatives and low-creatives differ significantly in socio-economic status..

In a study on creativity and socio economic status, Seetharam and Vedanayagam (1979) obtained no significant difference between mean creativity scores of high-, and low-, socio economic status groups.

Asha (1983) in her study found that mother's employment is a significant factor that facilitate development of creativity in children.

According to Scott (1984) creative children differ from non-creative children in three areas; variety of intellectual/cultural activities in the home, extent of the child's creative activities; and flexibility in the household. When analysed by grade levels, third grade subjects differed in two areas viz. flexibility in the household and variety of the fathers intellectual/cultural activities and interest and fifth grade subjects differed significantly in the area of extent of child's creative activities.

Jarial and Sansanwal (1984) studied the effect of socio-economic status on verbal and non-verbal creative abilities of students. The study revealed that socio- economic status has a significant effect on verbal creativity, but not on non-verbal creativity.

In a comparative study of high-, average-, and low-creative secondary school pupils Devi (1984) found that following familial variables are capable of discriminating the different groups of creative subjects; (i) Mother's educational level, (ii) Father's income level, (iii) Home learning facility and (iv) Father's educational level.

A more recent study by Sumangala (1986) found significant correlation between creativity and family relation (0.239) and between creativity and home environment ($r = 0.233$).

Sumangala (1986) found significant positive correlation between (i) creativity and parental income level ($r = 0.380$), (ii) creativity and parental occupation level ($r = 0.368$) and (iii) creativity and parental education level ($r = 0.349$).

Nair (1987) also found significant positive correlation between creativity and fathers educational level.

In a study conducted by the investigator (1987) himself on some social familial variables discriminating between creative and non-creative secondary school pupils found that the following variables exhibit highly significant difference between creative and non-creative subjects.

1. Parental occupation level
2. Socio economic status.

Asifa (1988) conducted a study on the effect of number of sibling and birth order of adivasi students upon composite creativity and its components fluency, flexibility elaboration and originality. The study found that:

- i) There is no significant difference in the creativity scores and its components of the adivasi female student of small and large number of sibling groups.
- ii) The earlier birth ordinal position group was found better than the later birth ordinal position in composite creativity, fluency and originality. But in the case of elaboration and flexibility it was found as not significant.
- iii) The interaction effect of number of siblings and birth order upon composite creativity and its components found are not significant.

Shamshad (1988) in his cross cultural study of creativity found that both male and female tribal subjects are significantly better on elaboration aspects of creativity as compared to their non-tribal counterparts whereas in originality, the non tribal are better.

Sumangala (1988) in a study found that the social and familial factors (as evolved by factor analysis) of high and low creative secondary

school pupils are distinct and that the factor structure of the two groups are also different.

A study conducted by Sushila and Chandran (1989) found that age and socio-economic status of the child have a definite influence over their creative ability.

In a study of creativity in relation to Demographic variables, Santhamma Krishnan and Andal Ramalingam (1990) found that there is birth order influence on creativity. Among the four birth orders included for the study, the last borns are the most creative.

Raw, James, S, Marjoribanks, Kevin (1991) in their study reports of relationship between adolescents' perception of family and school environments and measurements of their creativity, morality and self concepts. The study concluded that self concept, morality and creativity have modest association with perceptions of family and school environment.

The study conducted by Anil Kumar (1992) on secondary schools found that significant relation exists between socio economic status and creativity and with its components, fluency, flexibility and originality.

Gaynor, Joni, L. Radio, Runco, Mark, A. (1992) examined the relationship of age-interval between siblings and children's creative

abilities as well as parental view on the creative abilities of 116 children of ages 9-12 years. The study found that larger age intervals resulted in greater creativity and the age intervals also interacted with birth order, family size and age.

Goutham (1993) studied Navodaya Vidyalaya students and found that high socio-economic status group of students are more creative than students of low socio economic status group.

Chaurasia, Omkar (1993) in a study reported that creativity is significantly correlated with family functioning. All the three groups, viz. good average and poor family functioning groups, differed significantly on creativity.

Syamala Devi (1993) in her study tested whether there is any significant difference between high- average-, and low- creative pupils (taken in pairs) in the mean score of the variables (parental education level, parental income level and socio economic status. The analysis revealed that significant difference exist in the case of all these variables suggesting significant relation between socio-economic status and creativity.

Nair, P. Viswanathan (1994) in his study compared social familial factor structures of the high creative and low creative urban subject, and found the presence of dissimilar factors for the two groups. The

comparison of social familial factor structures of high creative and low creative rural subjects further revealed the existence of dissimilar factors for the two groups. The dissimilarity of the social familial factor structures for the high creative and low creative (urban) and high creative and low creative (rural) subjects were probably due to differing interaction of their variables with creativity of school pupils residing in rural and urban areas.

Kaile, Harnek, S. and Punia, Thejinder Kaur (1994) in their study found (i) no significant relationship between creativity measures and socio economic status, (ii) no significant relationship for creativity with socio economic status for high, average, and low socio economic groups. (iii) No significant difference between high, average and low socio economic groups on different measures of creativity.

Thampuratty (1995) in a study found that mean scores of parental income, parental occupation and parental education of creative high achievers were significantly higher than those of creative low achievers.

Singh, Bhooden (1996) in a study revealed that family size, socio-cultural and educational background of the family and level of aspiration of biographical factors suppressed pupils creativity.

Sumiti Khare, Avinash Grewal (1997) in a study, reported that there is no significant difference in creativity score of formal primary school students and non formal education centre school students.

Tennent, Lee, Berthelsen, Donna (1997) in their study examined aspects of family environments that are considered to be influential in the development of children's creativity. Mothers of children of age 4 to 6 years were surveyed on their valuing of particular personality characteristics and specific features of the home environment (The creative environment scale). Majority of mothers were found to be providing environment that are considered nurturing of creativity and valued personality characteristics important to creativity.

Pradhan, Akhani and Janbandhan (1997) in a study revealed that SES do not significantly influence verbal fluency, but the combined effect of SES and intelligence resulted in high verbal fluency.

2.2.3. Achievement Motivation and Underachievement

Studies under this group have been classified as follows:

The earlier studies by Burgers (1956), Lun (1960) and Reed (1963) established that there is significant difference between overachievers and underachievers in their need for achievement.

But another earlier study by Singh (1965) showed that there is no significant difference in achievement motivation between high-achievers and low-achievers.

Srivastava (1967) investigated the factors associated with underachievement and found that underachievement is related to low-academic motivation.

Again two independent studies by Pal and Saxena (1970) and by Quigly (1972) found that underachievers lack motivation.

Pathak (1974) studied the factors which discriminate between high- and low-achievers in Science. The study concluded that underachievers show lack of interest in their studies. Studies by Kulwant (1973) Simmon and Bibb (1974) Kholi (1975) and Aggarwal and Krishna (1978) have found that underachievement is attached by achievement motivation.

Tandon (1983) studied the personality characteristics of underachievers and found that both male and female under-achievers are not diligent, take less interest in studies and spend more time in roaming.

In Kerala, a study by Nair (1984) found that achievement motivation can differentiate underachievers from over and normal underachievers in Malayalam.

But Valsamma (1984) obtained opposite results in Biology. In her study it was found that achievement motivation could not differentiate underachievers from over and normal underachievers in Biology.

Nair (1989) in his study found that achievement motivation has a significantly discriminates between creative underachievers from non-creative underachievers in Science.

Varma (1990) investigated the relationship of academic motivation and text anxiety with academic achievement using a sample of 36 high and 59 low achievers. The study revealed that high achievers have high academic motivation.

Rumki Gupta, Manjila Mukerjee and S. Chatterji (1993) in their comparative study of the factors affecting Academic Achievement among four groups of adolescents report that Achievement motivation is significantly related with Academic Achievement only in girls group. It has no effect in boys group.

Jagade, Joseph O (1994) examined the influence of Achievement Motivation and gender on 160 Nigerian Secondary School Students, performance in English. Two multiple regression analysis indicate that English Language performance could be reliably inferred from the level of Achievement Motivation.

2.2.4. Attitude towards School subjects and Underachievement

Varma (1962) conducted an investigation to study the correlation between attitude of children towards mathematics and their achievement in it. The study revealed that there is significant and positive correlation between attitude and achievement..

Aitken (1970) conducted a study on the relation of attitude with achievement at elementary, high school and college levels which revealed a positive but not significant correlation.

Attitudes are developed mostly by the influence of environment. Page et al. (1977) defines attitude as predisposition to perceive, feel or behave towards specific objects or certain people in a particular manner. Attitude may be positive or negative. Role of attitudes in directing achievement has been studied by many investigators and a few of these studies are presented below.

Good (1979) in a study of attitude towards science and scientists of students and teachers in India obtained a correlation coefficient of 0.98 which is highly significant indicating that persons high on attitude towards science has high understanding of science also.

Study by Pillai (1981) revealed that for high school students the correlation between achievement in Biology and attitude towards science is low.

Nan (1984) in an investigation of factors related to Achievement in Biology found that attitude towards science discriminate significantly between overachievers, normal achievers and underachievers.

Sudha (1985) in a study of personality variables as predictors of academic achievement found that attitude towards studies has high significant correlates with academic achievement.

A study by Kumari Sujatha (1985) on the relative efficiency of science aptitude, science interest and attitude towards science in predicting biology achievement found that there is real and significant correlation between attitude towards science and achievement in biology.

The study by Varghese (1986) on the relationship between science interest, attitude towards science, and chemistry achievement, found that there is significant difference between high achievement group and low achievement group in their attitude towards science.

Indira (1989) in a study of the relation between attitude towards science and achievement in physics found significant relation between the two variables.

Jayashree (1991) found that the coefficient of correlation between attitude towards science and biology achievement is positive and significant.

Study by Sreelatha Amma (1992) indicates that there is significant relation between Attitude towards Science and Achievement in Biology.

Prameela (1992) in a study to find efficiency of some cognitive and affective variables, in predicting achievement in physics found that attitude towards science can be used as a predictor variable.

2.2.5. Social-Familial Variables And Underachievement

A review of the studies presented in this part brings to light the relation between underachievement and a number of social-familial variables like parental education, parental occupation, socio economic status and home environment of subjects.

The parents of underachievers have been found by Terman and Oden (1947) to be less educated than those of better achievers.

Rao (1960) found that socio economic status of the students is not significantly related to scholastic achievement.

Karness associates (1961) in a study of elementary school children in the Champign Illinois School system compared parental attitude of academic underachievers and overachievers .The study found that overachievers saw themselves as more accepted and intrinsically valued by their parents than did the underachievers.

A study by Pepinsky and Borow (1962) concluded that most of the underachievers belong to middle socio economic groups.

Holder (1962) points out that the parents of underachievers spend less time with their children than parents of achievers. In a comparative study of high and low achievers

Roberts (1962) found that fathers and mothers of high achievers have the slightly higher ranking occupations.

Das and Das (1962) found that students whose achievement are low, come from poor socio-economic background when compared to pupils whose achievement are high. In this connection Hall (1969) observed that students from lower socio economic background experience low academic success. Abraham (1978) also found that higher educational level of parents is related to lower percentage of the incidence of underachievement.

Chopra (1964) in a study of the relationship of SES with achievement of students of secondary schools found that socio economic status has no significant effect on achievement of the intellectually able pupils. But socio economic status significantly affect the achievement of pupils of medium and low intellectual ability.

Pavithran and Ferose (1965) studied the relationship between SES and scholastic achievement and revealed that there is no significant relationship between scholastic achievement of the pupils and educational status of the family.

Warrier (1966) found significant relation between socio economic status and achievement of the children.

Srivastava (1967) in a study obtained that underachievement is related to family adjustment. In connection with this, Joshi and Sharma (1968) found that conflicts in the family and the burden of domestic duties are factors related to underachievement.

Swift (1967) found that economic factors are positively related to the performance of children and the relationship between educational experience of parents and attitude towards school of their children is positive.

Hall (1969) obtained that students belonging to lower socio economic status, experience low academic success, while those with middle socio economic status are better in their academic achievement.

Hillard and Roth (1969) in their study investigated relationship between the mother-child relationship and underachievement. It was found that mother of underachievers are less accepting of their children than mothers of overachievers.

Bhaduri (1971) in his study compared overachieving with underachieving students on several psychological characteristics. One of the major findings of the study was that the underachievers tended to have a higher socio economic status, a more congenial home condition and of more leisure time activities.

Gopalakrishnan (1972) found that most of the rank holders belong to middle and high income groups and rich home facilities. More over, most of the rank holders belong to English medium classes which is an indirect index of their higher socio economic status.

Study by Menon (1973) found that overachieving and underachieving groups are influenced by socio-economic and demographic characteristics.

Dave (1974) studied the relationship between language skills and variables like sex, parental education, occupation and income. Analysis of the data obtained that differences exist in language skill of the students coming from families of differential parental education, occupation and income.

Abraham (1974) attempted to identify factors leading to underachievement in English of secondary school pupils. The study obtained that the achievement level is associated with socio economic

status. According to Lalithamma (1975) children coming from large families are often underachievers.

Singh (1977) in his study compared scholastic achievement of socially advantaged with socially disadvantaged students. The study found that socially advantaged group is significantly superior in scholastic achievement of the socially disadvantaged group.

Padmini (1980) in her study of the group difference in Mathematics achievement of secondary school pupils found socio economic status to be a significant factor resulting in group difference in mathematics achievement.

Reddy (1981) found significant positive relationship between socio economic status and academic achievement.

Nair (1981) conducted a study to assess the role played by some social familial variables in causing underachievement in secondary school Mathematics. The following six variables were selected for the study.

1. Father's professional level
2. Father's income level
3. Father's education level
4. Mother's education level
5. Caste
6. Family size.

For the first five variables, the critical ratio are negative which lead to the conclusion that greater incidence of underachievement is associated with the lower levels of these variables.

White (1982) and Subramanian (1983) found that home environment is one of the factors which influence the academic achievement of a child.

Mark (1984) found that parental educational qualifications have greater impact on child's academic performance than do mother's educational qualification. The findings clearly indicate that it is beneficial for children if their parents have higher qualifications than mere literacy.

Reader and Conger (1984) studied the effects of parental education, occupation and encouragement on the educational attainment of black and white women. For both groups of men, father's education was more important than that of mother. Mother's occupation and parental expectation are more important for black women while parental education is more important for white women.

Winger (1984) examined the relationship that exist between psycho-educational and parental variables and measures of academic achievement of elementary school gifted males. The results of the study indicate that psycho educational and parental variables play a significant role in the development of underachievement in gifted students.

Rajaput (1984) in his study arrived at the conclusion that socio economic status of the children affects the achievement of students in mathematics.

Lee (1985) studied the relationship between home environmental variables and the reading achievement of 27 average readers and 27 superior readers. The study found that parents of superior readers read more themselves, provide more books, and other reading materials, and engage in more educational language activities with their children. The study also revealed that parental assistance is inversely related to reading achievement, with average readers receiving more assistance than superior readers.

Kemp (1985) investigated the relationship between parental involvement and achievement. The study also investigated whether or not parental involvement was more significantly related to achievement than selected family background variables. The study found significant but low correlation between parental involvement and achievement.

Jagannathan (1985) in a study found that academic achievement and type of family, father's education, etc. are inter-related.

Varma (1985) found that the mean achievement score of the SC students is significantly lower than the mean score of students from other castes.

Singh (1986) in his study found that achievement in Mathematics is significantly related to socioeconomic status.

Golwalker (1986) in his study of scientific attitude, creativity and achievement of tribal students of Rajasthan had seen that non-tribals have higher scholastic achievement in Science subjects than tribal students.

Usha (1986) studied the relationship between pupils achievement gap and their learning environment. She found a significant relationship between achievement gap in science and low encouragement given to pupils by parents in learning science.

Gafoor (1987) found positive correlation between achievement in biology and socio economic status.

George (1988) found that parental influence is a very decisive factor in the achievement of children.

George (1989) in his study reported that achievement in Hindi and education level of father are related.

Padmakumari (1990) found in her study that socially advantaged and disadvantaged groups differ in the mean score of achievement in Mathematics and Attitude towards Mathematics.

Lange (1991) in her study about the achievement patterns of early adolescents found that family income and parental education have significant influence on the achievement of sixth grade adolescents.

Kadeeja (1991) in her study came to the conclusion that the main effect of socio economic status on achievement in Chemistry is not significant.

The study of Bhatnagar and Sarma (1992) indicated that children whose parents attended school performed at a significantly higher level than others.

Mumthas (1993) in her study to test whether parental education has significant effect on achievement in Mathematics, came to the conclusion that educational level of parents counts much in their children's achievement in mathematics.

Schults, Geoffrey (1993) examines relationships among socio economic advantage, achievement motivation and academic performance in an urban elementary school population of 130 African American and Hispanic fourth through sixth grade students. Results indicate that socio economic advantage and achievement motivation are significant mediators of academic performance among minority children, independent of intellectual ability.

Keith, Patricia B. and Lichtman, Marilym, V (1994) in their study found that parental involvement influences overall academic achievement and promotes gains in the specific areas of reading, mathematics, science and social studies.

Reis, Sally, M. Herbert, Thomas P. Dias, Eva, Maxfield, Lon (1995) in their three year study compared characteristics of high ability students who were identified as high achievers with students of similar ability who under achieved in school. These students attended a large urban high school comprised of 60 per cent Puerto Rican students. The study found that achievement and underachievement are not disparate concepts, since many students who underachieved had previously achieved at a high level and some generally high achieving students experienced periods of underachievement. No relationships were found between poverty and underachievement, between parental divorce and underachievement, or between family size and underachievement.

Feign, Naami (1995) in his study of 'factors contributing to the academic excellence of American Jewish and Asian students found that traditional socio economic measures explain a portion of the advantages of these groups over other racial ethnic groups and chanced the advantage of Jewish students over Asian students.

Sandquist, Kavin (1995) in a study of 'Verbal boys and Mathematical girls: Family background and educational careers' reported that verbal boys with high ability and highly educated parents, but parents of verbal boys of lower ability had exceptionally low level of education. Mathematical girls of high ability are distinguished by a high father presents and highly educated parents

Bronza A, and Avline, L. (1996) in their study guiding children along the smart path to happiness, reported the following major findings.

1. Birth order do not relate to school success.
2. Important for academic performance are : (i) fair parental treatment and self discipline, (ii) family expectation and cultural background, (iii) the love of learning which is learned at home where parents value learning and which was reinforced in enriched school environments.

Lee Corbin Hilary, Evans, Roy (1996) used quantitative and qualitative measures to examine reasons for underachievement of success in 9-11 year olds. They found poor handwriting when stemming from weak motor skills and poor eye hand co-ordination mark underachievement. Socio economic factors influence differences in mathematics, but not reading ability. Academic success is more prevalent in higher SES group.

Pradhan, Didiyaprabha. *et. al.* (1997) studied the effect of sosio economic status and intelligence on scholastic achievement of 90 school girl students of grade 6 and 7 and reported that significant relationship exists between intelligence and scholastic achievement, whereas no such relationship was observed between SES and scholastic achievement.

Chathurvedi Archana (1997) in her study reported that tribal boys and girls do not differ significantly on creativity. The study further revealed that high creative and low creative tribal boys and girls significantly differ in their scholastic achievement.

Chathurvedi Archana (1997) in her study reported that tribal boys and girls do not differ significantly on creativity. The study further revealed that high creative and low creative tribal boys and girls significantly differ in their scholastic achievement.

Suneetha and Kayuri (1999) in their study 'effect of familial factors on academic achievement of school children' found that parental factors namely father's occupation and parental contributions have significant effect on academic achievement of children.

2.3. TREND REPORT

The studies reviewed in this chapter under the headings viz. Achievement Motivation and Creativity , Social Familial Variables and

Creativity, Achievement Motivation and Underachievement, Attitude towards School Subjects and Underachievement and Social Familial Variables and underachievement enabled the investigator to summarise the trends of the research studies as follows.

The major work done in the area of creativity can be classified as belonging to two major dimensions viz., psychological correlates of creativity and social familial correlates of creativity but not with academic achievement.

Much of the work done by both western researchers and Indian researchers in the area of psychological variables deal with general personality characteristics of creative individuals

In the case of Social Familial variables western researchers identified a large number of variables from the area which correlates with creativity. Indian studies points that social familial variables like parental education level, parental occupation level, cultural background of the family, family acceptance of education, family size, birth order etc. are the major social-familial correlates of creativity.

Majority of the reported studies have been designed to explore separately the relation between creativity and psychological variables and social familial variables. But comprehensive correlational studies of

creativity covering both psychological and social familial variables are scanty.

Even though a good number of studies are available on the relation between creativity and achievement, the investigator couldn't locate any study on the relation between creativity and underachievement in any of the school subjects.

With regard to underachievement also, the major work done fall into two major headings, viz. Psychological factors related to Underachievement and Social-Familial factors related to Underachievement.

Relation between Underachievement and Familial variables are rarely studied by Indian researchers. The variables that have been covered most by researchers are Social Variables like Parental Education Level, Parental Occupation level, Socio Economic status, Sex of the subject, etc.

Many of the important studies conducted in Western countries need to be revalidated in the Indian cultural context, before they can be held to be valid in the Indian Educational set up. The value system, administrative pattern, conceptualisation of the process of education etc are so different in India that most of the findings cannot be generalised to the equivalent Indian population.

CONCLUSION

Reported studies in the area of Creativity threw light on the relation between Creativity, Achievement Motivation and a number of Social familial variables. The survey of the researches further helped to identify some of the major psychological and social familial factors related to underachievement. Most of the reported studies treat creativity in relation to anyone of the two major groups of variables, psychological and social dimensions but not with underachievement. At the same time psychological and social familial dimension have been separately explored in relation to underachievement in various subjects. A comprehensive study of the present kind which intend to explain the relation and role of Achievement Motivation, Attitude towards Malayalam and Social Familial Variables which differentiate between High Creative Underachievers and Low Creative Underachievers is therefore a worthwhile study.

METHODOLOGY

E. S. Ramesan “Achievement motivation, attitude towards malayalam and some social-familial varlables differentiating between high-, and low-creative underachievers in Malayalam among secondary school pupils of Kerala” Thesis. Department of Education , University of Calicut, 2000

METHODOLOGY

Variables
Tools used for Collection of Data
Sample drawn
Data Collection Procedure, Scoring and
Consolidation of Data
Statistical Techniques used for the Analysis of
Data

METHODOLOGY

A scientific investigation is a process of problem solving in which the procedure adopted, sample selected, tools used and statistical techniques applied are highly significant for arriving at and interpreting the results. Further validity of the results of the study depends upon these processes. This chapter presents details of the different components of these process under the major headings, viz.,

- (I) Variables
- (ii) Tools used for collection of data
- (iii) Sample drawn
- (iv) Data collection procedure, scoring and consolidation of data
- (v) Statistical techniques used for the analysis of data.

Each of the above is described below in detail.

3.1. VARIABLES

The major objective of the study is to identify those variables from a select set of predictor variables which may differentiate between High Creative and Low Creative Underachievers in Malayalam of secondary school pupils. The study therefore warranted the use of two types of variables viz., criterion variables and predictor variables. The details are given below.

3.1.1. Criterion Variables

As the investigator is interested in identifying the discriminating variables between High and Low Creative Underachievers in Malayalam the study is designed with the following as criterion variables to locate and classify the two groups. HCUA and LCUA in Malayalam.

1. Intelligence (Verbal and Non verbal)
2. Achievement in Malayalam
3. Creativity

3.1.2. Predictor Variables

1. Achievement Motivation
2. Attitude towards Malayalam
3. Home Learning Facility
4. Family Acceptance of Education
5. Family Cultural Level
6. Family Environmental Index.
7. Socio Familial Index
8. Parental Education Level
9. Parental Occupation Level
10. Parental Income Level
11. Socio Economic Status
12. Family Size
13. Birth Order

3.2. RATIONALE OF THE SELECTION OF THE PREDICTOR VARIABLES

The predictor variables of the study were selected on the basis of an initial review of theoretical literature and on empirical studies of this area. Studies conducted so far revealed that creativity and underachievement are not independent phenomena. Rather they are directly influenced by a number of factors, some of which are personal to the individual while many others are environmental. Hence the identification of these different characteristics related to the two phenomena is critical. The better understanding of these phenomena will provide means of an early identification of individuals who are more likely to be creative and high achievers and hence their ability for high achievement and creative potentialities can be nurtured to the high extent which will be highly beneficial to the society. The investigator selected the above cited predictor variables with such an intention.

3.3. TOOLS USED FOR THE COLLECTION OF DATA

For the scientific verification of the proposed hypotheses, the variables of the study are to be measured. This necessitated the use of research tools standardised for the population of the study and with satisfactory psychometric indices. For the present study the investigator used both available standardised tools and newly standardised one by the investigator. The tools thus used in this study are:

- (i) Kerala University Group Test of Verbal Intelligence (Pillai, et. al., 1968)
- (ii) Calicut University Letter Matrices Test of Intelligence (Nair,1984)
- (iii) Generalised Test of Achievement in Malayalam for Secondary School Pupils of Kerala (Kalu and Sainudeen, 1987).
- (iv) Verbal Part of the comprehensive Test of Creativity for Secondary School Pupils (Sumangala, 1987)
- (v) Kerala Scale of Achievement Motivation (Nair, 1980)
- (vi) Scale of Attitude Towards Malayalam (Sumangala and Ramesan, 1992)
- (vii) Socio Familial Inventory (Nair and Devi, 1982).
- (viii) Kerala Socio-Economic Scale (Modified) (Nair, 1980).

The components measured under each tool and the psychometric details of each are presented in Table 1.

Table 1
Psychometric Details of the Tools used

Sl. No.	Tools used	Variables measured	Time limit (minutes)	Reliability	Validity
1	Kerala University Group Test of Intelligence (Verbal)	Verbal Intelligence	35 mts.	Test-retest 0.79 (N = 86) Split half 0.94 (N=120)	Inter test correlation with school mark as external criterion $r = 0.64$ (N = 50); $r = 0.56$ (N = 120) against RMPT and ensured Factorial Validity
2	Calicut University Letter Matrices Test of Intelligence	Non Verbal Intelligence	30 mts.	Test-retest $r = 0.5$	$r = 0.4$ (N = 50)
3	Generalised Test of Achievement in Malayalam for Secondary School Pupils of Kerala	Achievement in Malayalam	90 mts.	Split half $r = 0.91$ (N= 50)	Concurrent validity $r = 0.87$ (N = 50)
4	Verbal part of the comprehensive test of creativity for secondary school pupils	Semantic Creativity	33 mts	Cronbach coefficient $\alpha = 0.81$ (N = 40)	Concurrent validity $r = 0.507$ (N = 30)
5	Kerala Scale of Achievement Motivation	Achievement Motivation	No time limit	Test-retest $r = 0.73$ (N = 546)	Validity against the total achievements of students of secondary school class validity indices STD.VIII (N=47; $r = 0.38$) Std. IX (N=38; $r = 0.64$) Std. XI (N=42; $r = 0.39$)
6	Scale of Attitude towards Malayalam	Attitude towards Malayalam	No time limit	Split half method 0.801 (N = 45)	$r = 0.288$ (N = 45)
7	Social Familial Inventory	Home Learning Facility Family Acceptance of Education Family Cultural Level Family Environmental Index	No time limit	Split half $r = 0.67$ (N = 40) $r = 0.91$ (N = 40) $r = 0.45$ (N = 40) $r = 0.65$ (N = 40)	Concurrent Validity 1) $r = 0.73$ (N = 40) 2) $r = 0.45$ (N = 40) 3) $r = 0.78$ (N = 40) 4) $r = 0.85$ (N = 40)
8	Kerala Socio Economic Scale (General Data Sheet)	Parental Education Level Parental Occupation Level Parental Income Level Family Size Birth Order	No time limit	Not standardised	

3.3.1. Kerala University Group Test of Verbal Intelligence

This is a test, developed by Pillai (1968) to measure the general intelligence 'g' of secondary school pupils of Kerala. The test consists of five sub tests, viz., Verbal analogy, Verbal classification, proverbs, Number series and verbal Reasoning

The nature of the sub tests is described below.

Analogy:- The test is to measure the ability of the pupil to see the relationship between two things or ideas and to use the relationships to other situations. The test has 20 items. In each item of this test, three words are given, the fourth one being left blank. The first two words of the three suggest a relationship and the subject is required to select the fourth word from the four given alternatives which will establish the same kind of relationship with the third word of the first set.

An item of the test is given below.

Blood : Red :: Hair :

(Head, Black, Human being, Colour)

Ans: Black.

Classification:- In each item of the test, five words are given of which four can be grouped together according to some principle. The subject is

to find the word that stands out from others. The test has 20 such items, and the time for the test is 5 minutes.

An item of the test is given below.

Kerala, Tamilnadu, Karnataka, Andhrapradesh, Delhi.

Ans Delhi.

Proverb:- Each item of the test is a proverb followed by 4 statements explaining its meaning. The subject is to find out the most appropriate meaning.

The test has 20 items and time to complete the test is eight minutes.

An item of the test is given below

All that glitter is not gold.

- a) The external and the internal characters of anything need not be the same.
- b) All the shining materials are not gold
- c) Gold need not glitter always
- d) One should not judge the worth of something through a casual examination.

Ans: [d]

Number Series:- Each item of the first is a series of numbers arranged according to some principles. Out of which one number is missing. The subject is to find out the missing number based on the principle of the given series of numbers.

The test has 20 items and the time limit of the test is six minutes.

An item of the test is given below

12 14 13 15 14

[(a) 15, (b) 17 (c) 16]

Ans: [c]

Reasoning:- Each item is a problem requiring perception of some sort of relationship. The subjects to reach the answer by using that relationship.

An item of the test is given below

Krishnan is taller than Gopi, but shorter than Venu, and Soman is taller than Venu. Who is the tallest?

[(a) Gopi (b) Venu (c) Soman]

Ans: [c]

3.3.1.1. Mode of Answering and Scoring

The test book let consists of five sub-tests. Each sub-test has twenty multiple choice questions. Separate score sheets are provided for the test to mark the responses. Students had to put an 'X' mark for the correct answer in the circle provided in the score sheet.

Separate punched scoring keys were used for scoring the answer sheets. One score each was given to the correct answer and zero score to wrong answers.

3.3.1.2. Reliability and Validity

Split-half reliability was worked out for the whole test as well as for the sub tests. The split-half reliabilities are given in Table 2.

Table 2

Split half reliability coefficient of
Kerala University Verbal Group Test of Intelligence

Sl.No.	Sub-Test	Reliability Coefficient
1	Verbal Analogy	0.88
2	Verbal Classification	0.86
3	Proverbs	0.66
4	Number Series	0.86
5	Verbal Reasoning	0.84
6	<i>Whole Test</i>	0.94

High internal validity was ensured through this analysis. Inter correlation of the sub test also were worked out on a select representative sample (N = 120). The correlation coefficients show that there is considerable overlapping between sub test abilities

The factorial validity of the test was established in a later study by Kurup, which showed that 75 per cent of the common variance of the battery was accounted for by a general factor 'g' intelligence. The Inter-test correlation matrix of the sub test of the verbal group test of intelligence are given in Table 3

Table 3
Inter test-Correlation Matrix of the
Sub Tests of the Group Test of Verbal Intelligence

Sl. No.	Sub Test	I	II	III	IV	V
1	Verbal Analogy	()	0.75	0.66	0.45	0.56
2	Verbal Classification		()	0.63	0.47	0.81
3	Proverbs			()	0.47	0.41
4	Number Series				()	0.32
5	Verbal Reasoning					()

Validity of the sub tests were established statistically. The validity coefficients obtained of students 1 to V with school marks as external criteria are 0.61,0.53, 0.63, 0.67 and 0.45 respectively.

A copy of the tool and response sheet is given as Appendices I & I(a).

3.3.2. Letter Matrices Test of Intelligence Sets I & II

The test battery consists of two sub tests each sub test having 30 items. This non-verbal test of intelligence is intended for pupils of above 12 years of age.

In each sub test there are 30 items and the time limit fixed to complete it is 15 minutes each. In each test item English alphabets are given in a matrix order in which one cell is empty. Four alternatives are given corresponding to each item in a separate response sheet. All of these alternatives fit the empty cell, but one is logically correct. The subject is required to study the matrix, and to select the correct one from the given alternatives.

Two illustrative examples are given below for each sub-test.

Set I**Example**

1)

A	B
P	?

Answer

A	B	P	Q
			X

2)

C	A
D	?

Answer

D	C	B	A
		X	

Set II

Example

1)

O	P	Q
P	Q	O
Q	O	?

Answer

P	R	O	Q
X			

2)

F	H	F
H	F	F
F	F	?

Answer

G	F	O	Q
X			

3.3.2.1. Scoring Scheme

The scoring scheme is: One score for each correct response, and a zero score for an incorrect response.

3.3.2.2. Reliability and Validity

The reliability of the test established by the test-retest method is 0.05. The test when validated against Verbal Intelligence Test, the validity coefficient was found to be 0.4.

As the Tests of Intelligence (Verbal and Non-Verbal) are the ones constructed and standardised in 70's the investigator revalidated the tests for the study to know how far these tests are valid to the present population of secondary school pupils (as this population is entirely different from the ones of seventy's in several characteristics)

The tests were validated with the extended criteria as the scores of the test of Raven's Progressive Matrices for a group of 50 secondary school pupils. The validity coefficient so found was 0.50 for the test of Verbal Intelligence and 0.58 for the test of Non Verbal Intelligence.

This evidenced that the tests were usable for the population for which the study was conducted.

Response sheets of Letter Matrices Test of Intelligence Set I and Set II are given as Appendices II & II(a).

3.3.3. Generalised test of Achievement in Malayalam for Secondary School Pupils of Kerala

This is a test constructed and standardised by Kelu and Sainudeen in 1987 to measure Achievement in the generalised concepts of Malayalam. The test is called the Generalised Test of Achievement in Malayalam, as the test items are not with regard to the content of a particular standard. But it measures the general content parts of Malayalam like Vocabulary, Grammar and Structure, etc. which are highly essential for the successful use of Malayalam language. The test consists of 35 multiple choice items, 25 short answer type items and one essay item. The blue print of the test is presented as Table 4. The maximum mark for the test is hundred and the duration of the test is 1½ hours.

Table 4
Blue Print of the Test

Objectives Sub units	Knowledge			Understanding			Application			Appreciation			Expression			Total
	O	S	E	O	S	E	O	S	E	O	S	E	O	S	E	
1	10(10)	2(2)			4(4)											16(16)
2				13(13)												13(13)
3				2(2)				4(2)						4(1)		(10(5))
4					15(5)											14(5)
5					16(9)											16(9)
6	7(7)			3(3)												10(10)
7					5(1)						4(1)					9(2)
8																12(1)
	17	2		19	39			4			4			4	12	100
	19(19)			57(37)			4(2)			4(1)			16(2)			100(61)

'O' Objective type questions';

'S' Short answer type questions;

'E' Essay type questions.

3.3.3.1. Scoring

The scoring was done as per the scoring scheme shown in the blue print.

3.3.3.2. Reliability

Reliability of the test was established both by split half method and by test-retest method. The Split half method (odd-even technique) reliability co-efficient was found to be 0.91.

The test-retest reliability (N = 50) with an interval of 3 weeks was found to be 0.91. The two indices of reliability suggest that the test is a reasonable instrument to measure achievement in Malayalam of secondary school pupils.

3.3.3.3. Validity

The validity of the test was established by taking school examination marks as the external criterion. The coefficient of the validity obtained was 0.87 (N = 50). This index also shows that the test is a valid tool to measure achievement in Malayalam.

A specimen copy of the test and response sheet are given as Appendices III & III(a).

3.3.4. Verbal Part of the Comprehensive Test of Creativity for Secondary School Pupils

This test for measuring creativity of secondary school pupils of Kerala was developed and standardised by Sumangala in 1987. This test was modelled after the well known Guilford Test of Creative Thinking who listed the intellectual characteristics as most likely to be valid measures of creative talent as originality, redefinition adaptive flexibility, spontaneous flexibility, associational fluency expressional fluency, word fluency, ideational fluency elaboration and probably some evaluation factors.

The test has three parts. Each is named on the basis of the content of the test. The three parts are:

- A. Semantic Creativity
- B. Figural Creativity
- C. Symbolic Creativity.

In the test of Semantic Creativity, the stimuli are verbal materials. The content of the figural test is concrete materials such as perceived through the senses. The content of the symbolic test is composed of letters, digits and other conventional signs.

Since the present study is centered around underachievement in Malayalam, a language subject, the investigator used only the first part of the test viz., semantic creativity.

Table 5

Sub Tests of the Tests of Semantic Creativity

Sl. No.	Intellectual Characteristics measured by the test	Name of the Sub Test	No. of Items	Time limit of test in minutes
1	Word Fluency	First and Last Letters	2	5
2	Associational Fluency	Simile insertions	2	5
3	Ideational Fluency	Thing Categories	2	5
4	Semantic Spontaneous Fluency	Alternate uses	2	6
5	Sensitivity to problems	Product improvement	2	6
6	Originality	Remote Consequences	2	6
Total			12	33

Details of the Semantic test of Creativity are as follows.

The test has six sub tests and are,

(i) First and last letters

This is a direct adaptation of Guilford's task, word fluency and has two items. In each of the two items, the first and last letters of a word are given. Subjects are to write as many words as possible beginning and ending with the given letter within the specified time limit of 5 minutes.

Example: Write as many words as possible beginning with 'ka' and ending with 'ka'.

(ii) Simile Insertions

This test is intended to measure the associational fluency of ideas. Each item of the test is an incomplete sentence beginning with a simile and the remaining part of the sentence is left blank. Subjects have to write as many sentences as possible, completing the sentences with each adjectival simile in the blank space provided. The time limit of the test is five minutes.

Example: Write as many sentences as possible by completing with adjectival similes, associated with the given simile.

[As depth to ocean is]

(iii) Thing categories

This subject measures the ability of pupils to generate qualitative ideas within a given time. In each item, the subject has to name things that belongs to a particular category. This test has two items and the time limit is five minutes.

Example: Write as many objects as possible which can be qualified as 'disgusting'.

(iv) Alternate uses

Semantic spontaneous flexibility of the subject is measured by this test. Each item of the test is the name of an object. The subject has to write

as many usual and unusual uses of the subject. The items of the subjects are to be answered in six minutes.

Example: Write as many usual and unusual uses of 'tyre'.

(v) Product Improvement

This is a modification of Guilford Apparatus Test, intended to measure a subjective sensitivity to problems. In this test, the subject has to suggest usual and interesting improvements for given common appliances as items of the sub-test. The test has two items and the time limit of the test is six minutes.

Example: Give original suggestions for improving a 'School bag'.

(vi) Remote Consequences

This test is intended to measure subject originality in imagining the consequences of certain unusual situations. Each item is an improbable situation. The subject has to imagine the situation in its vivid details and then write down the consequences of the happening of the event, making as many guesses as he can, of the occurrence of that event. The sub-test has two items and the time allotted to complete the test is six minutes.

Example: 'Man can breath both in water and land'.

3.3.4.1. Scoring Procedure

The semantic test of creativity is scored mainly for the three factors of creativity viz., fluency, flexibility and originality. So each item of the test receive three scores and the sum of the three components (with equal weight given for each) for all items of the test is defined as the total score of creativity of a subject.

Fluency scores

For scoring, fluency is defined as the number of relevant responses. For each item under each sub-test, the relevant responses (excluding those repeated in an identical form) are counted and each relevant response is assigned a score. The total number of scores obtained for the items in each sub-test is the total fluency score of the sub test.

Flexibility scores

For scoring flexibility is defined as the number of relevant categories. The relevant responses are classified into categories for this purpose (The nature of the categories vary from item to item) one score is then assigned for a category, if at least one response comes under it.

Originality Scores

For scoring originality is defined as the unusualness of responses. The scheme of scoring originality is based on differing degrees of uncommonness of responses as given in Table 6.

Table 6

Scoring Scheme for Originality

Sl. No.	Grouping in terms of uncommonness of response	Score
1	Responses given by less than 1% in the sample	5
2	Responses given by 1 to 2% in the sample	4
3	Responses given by 2 to 4% in the sample	3
4	Responses given by 4 to 7% in the sample	2
5	Responses given by 7 to 12% in the sample	1
6	Responses given by more than 12% in the sample	0

3.3.4.2. The psychometric details of the test

The sub tests were selected for the test by checking for internal consistency. For this, scores of the sub tests were correlated with the total score of the test. Such tests having substantive correlation coefficients only were retained for the final test. The so obtained internal consistency coefficients of the six sub tests (with the total test) were found as 0.675, 0.652, 0.741, 0.907, 0.695 and 0.840 respectively.

3.3.4.3. Reliability

The Cronbach coefficient (α) which is applicable for free response type questions was estimated as an index of the reliability of the whole test. The (α) coefficient of reliability was found to be 0.81 for N = 40.

3.3.4.4. Validity

As the test is modelled after Guilford Test of Creativity and the content chosen are in line with the intellectual characteristics identified by Guilford to measure creativity, the author of the test claims content and face validity to the test. Further the author has established empirical or concurrent validity by comparing the scores of this test with those of the Kerala Verbal Test of Creativity developed by Nair and Sumangala in 1978. For a sample of 30 secondary school pupils, the coefficient of empirical validity established by the Pearson's Product Moment Coefficient of Correlation Method was found to be 0.507.

The coefficients of reliability and validity evidences that the test has satisfactory psychometric indices.

A copy of the tool is given as Appendix IV.

3.3.5. Kerala Scale of Achievement Motivation

The Kerala Scale of Achievement Motivation developed by Nair (1980), is standardised for senior secondary school students of Kerala. The scale is in Malayalam, which is for measuring the level of Achievement Motivation by self report of the subjects. There are sixty items in the scale in the form of statements. The differentiation measure the level of achievement motivation by presenting statements related to the subjects own view about achievement, the different ways adopted for achieving

the goals, opportunities for doing things extra ordinary, being a leader in different activities etc. Some items are for getting the opinion of the subject about the attitude of parents, friends and others towards his or her achievement, and also some are for finding out the subjects view about the achievement of others. The scale contains items to measure the power of sustenance of the subject, whether the values effort, and also whether he tries for developing new proposals and projects, etc. The scale, thus, on the whole measures the subjects, power to initiate direct and sustain achievement oriented behaviour. For each statement, the subject is required to respond by selecting and making any one of the three responses 'Y' (yes) 'U' (undecided) and 'N' (No) in the response sheet.

Two representative items of the scale are presented below:

1. It is my weakness that I cannot concentrate on one task for a long time.
2. I respect people who have shown that one can reach at any height of life.

3.3.5.1. Scoring Procedure

One score each will be given to the responses that show achievement motivated behaviour. There is no time limit for the scale.

3.3.5.2. Reliability and Validity

The test-retest reliability of the test is reported to be 0.73 (N = 56). Validity of the test is estimated by validating it against the total

achievement of the students of the secondary school classes. The validity indices are:

Standard VIII (N = 47) $r = 0.38$

Standard IV (N = 38) $r = 0.44$

Standard V (N = 48) $r = 0.39$

These psychometric properties of the scale show that it is a valid and reliable tool for measuring the achievement motivation of secondary school students.

A copy of the tool and response sheet are given as Appendices V & V(a).

3.3.6. Scale of Attitude towards Malayalam for Secondary School Pupils

Scale of Attitude towards Malayalam was developed and standardised by the investigator in collaboration with his supervising teacher Sumangala. The scale is a five point Likert-type attitude scale. This scale consists of thirty two statements of which statements 1, 6, 9, 10, 14, 16, 18, 19, 21, 23, 24, 27, 31 and 32 are negative while all others are positive.

The details of the development of the scale is described below.

Before writing the statements for the scale, the investigator made a study of all available standardised attitude scales like, Scale of Attitude

towards Science (Pillai, 1978) Scale of Attitude towards Problem Solving (Pillai, 1978; Scale of Attitude towards Education (Pillai and Ayshabi, 1982) and Scale of Attitude towards, Mathematics (Sumangala and Sunni, 1987). A survey of constructs measured under each scale, the nature of statements and procedures in developing the scale helped the investigator to write statements for the scale measuring Attitude towards Malayalam.

On the basis of informal criteria of editing statements suggested by various researchers like Edwards and Kilpatrick (1948); Wang (1932); Likert (1932); Thurston and Chave (1929), the investigator wrote 52 statements for the scale.

The written statements were given to some experts for their opinion with regard to relevancy and absurdity in the wording of statements. The statements were also given to some secondary school pupils who are to be given this scale.

On the basis of suggestions from the experts and pupils, about ten statements were rejected and some others were modified. The modified draft scale contained forty two statements of which 17 are intended to measure the negative affect and the others for the positive affect towards Malayalam.

The draft scale with necessary instructions for the pupils as to what the test is intended for the model of responding to the statements etc. were

then prepared and provided as introduction of the draft scale. Separate answer sheet, indicating serial number of the items at the extreme left; the five point answer columns heading SA, A, U, D and SD in the right, and five circles representing SA, A, U, D and SD against each statement was also got printed for the preliminary administration.

Example:

- 1) My great ambition is to become a good Malayalam teacher.

SA	A	U	D	SD
⊗	0	0	0	0

In this example 'X' is marked in the SA column. It shows that that pupil strongly agree with this statement.

- 2) I would like to talk in Malayalam even though I know the other languages.

SA	A	U	D	SD
0	⊗	0	0	0

In this example mark 'X' is in 'A' column indicating that pupil agree with this statement.

3.3.6.1. Scoring of the Scale

As the attitude of the pupil is to be expressed along a five point scale, the scoring scheme adopted for the scale is as follows. For positive

statements allot scores 5, 4, 3, 2 and 1, respectively for marking responses SA, A, U, D and SD. For negative statements allot scores 1, 2, 3, 4 and 5 respectively for marking responses SA, A, U, D, and SD.

3.3.6.2. Finalisation of the scale

Statements were selected for the final scale on the basis of their 't' values estimated by item analysis.

The 't' value the index of discrimination in the case of an attitude statement was calculated by the formula.

$$t = \frac{\overline{X}_H - \overline{X}_L}{\sqrt{\frac{S^2_H}{N_H} + \frac{S^2_L}{N_L}}}$$

In which \overline{X}_H = The mean response score on a given statement for the High group. \overline{X}_L = The mean response score on the same statement for the low group. S^2_H = The variance of the distribution of the response score of the high group to the statement. S^2_L = The variance of the distribution of the response score of the low group to the statement n_H = Number of subjects in the high group. N_L = number of subjects in the low group.

Here $N_H = N_L = N$, and hence the formula for 't' value reduced to the following working formula.

$$t = \frac{\overline{X}_H - \overline{X}_L}{\sqrt{\frac{\sum (X_H - \overline{X}_H)^2 + \sum (X_L - \overline{X}_L)^2}{N(N-1)}}$$

Where

$$\sum (X_H - \overline{X}_H)^2 = \sum X_H^2 - \frac{(\sum X_H)^2}{N}$$

$$\sum (X_L - \overline{X}_L)^2 = \sum X_L^2 - \frac{(\sum X_L)^2}{N}$$

The draft scale was tried out on a sample of 390 secondary school pupils (consisting of 195 rural pupils) and 195 urban pupils (195 boys and 195 girls) to determine the t-value of each statement which is an index of the discriminating power or the efficiency of the statement to discriminate significantly between pupils having favourable and unfavourable attitude towards Malayalam.

A statement with t-value greater than or equal to 1.96 was considered as a good statement for the final scale. The investigator further decided to select almost equal number of favourable and unfavourable statements with high 't' values for the final scale. On the whole thirty two statements were selected for the final scale. These thirty two statements consists of 18 positive and 14 negative statements.

3.3.6.3. Reliability

The reliability of the scale was assured using split half technique. The scores obtained for the odd numbered statements of the test were correlated with the score of the even numbered statements, for a sample of 45 secondary school students. For the whole test, the index of the stability was found to be 0.801.

3.3.6.4. Validity

The validity of the tool was established by comparing the scores of this scale with the school examination marks obtained in Malayalam. For a sample of 45 secondary school students the co-efficient correlation of validity established by Pearson's Product Moment coefficient of correlation was found to be 0.288.

A copy of the scale is given as Appendices VI & VI(a).

3.3.7. Socio-Familial Inventory

This is a tool standardised by Nair and Devi in 1982. The inventory measures the social familial backgrounds of secondary school pupils of Kerala. The inventory measures four major aspects viz.,

- i) Home Learning Facility
- ii) Family Acceptance of Education

- iii) Family Cultural Level
- iv) Family Environmental

For the present study, each of the above is used as an independent variable. Each part is therefore described below for its nature.

3.3.7.1. Home Learning Facility Inventory (1981)

This inventory developed by Nair and Nirmaladevi is to measure the various facilities for learning that the parents arrange at home.

The inventory seeks information on twenty three major questions, mainly on the availability of the physical facilities at home for learning. Subjects have to mark either 'Yes' or 'No' against each question.

Two of the questions posed in this inventory are given below

.Which of the following facilities are available in your home for study?

	Yes	No
Separate room	<input type="checkbox"/>	<input type="checkbox"/>
Separate chair	<input type="checkbox"/>	<input type="checkbox"/>
Separate lamp	<input type="checkbox"/>	<input type="checkbox"/>
Home library	<input type="checkbox"/>	<input type="checkbox"/>

1. Which of the following reference materials/accessories are available to you in your home?

	Yes	No
English Dictionary	<input type="checkbox"/>	<input type="checkbox"/>
English Malayalam Dictionary	<input type="checkbox"/>	<input type="checkbox"/>
Logarithm Table	<input type="checkbox"/>	<input type="checkbox"/>
World Map	<input type="checkbox"/>	<input type="checkbox"/>
Map of Kerala	<input type="checkbox"/>	<input type="checkbox"/>
World Atlas	<input type="checkbox"/>	<input type="checkbox"/>

Scoring

A score of 'one' is given for a 'Yes' answer and a score of 'zero' for a 'No' response. The maximum possible total score of the inventory is thus twenty three.

Reliability and Validity

The reliability of the inventory as reported by the authors was assessed using split half method on a sample of 40 secondary school pupils. The reliability obtained was 0.67.

The home learning facility inventory was developed incorporating the theoretical model adopted in reputed psychological tests like California psychological inventory and the family integration inventory. The theories used in the development of the inventory and the format of the inventory suggests the construct validity of the inventory. The inventory showed content validity when a logical analysis was made of the inventory questions. Concurrent validity was established by correlating, the scores of the inventory with an external criterion, viz., scores of the family integration inventory using a sample of 40 secondary school pupils. The validity obtained was 0.73.

3.3.7.2. Family Acceptance of Education Inventory

This scale as a part of the Social Familial Inventory was developed by Nair and Nirmala Devi to rate the extent to which the parents accept the educational work of their children.

The inventory contains sixteen statements and three possible answers to each namely 'Always' 'Sometimes' 'Never' given along with each statement. Students have to read each statement carefully and put a tick mark in the appropriate squares.

Some of the statements in this scale are given below:

	Always	Sometimes	Never
Your parents check up your school work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your Parents help you to do your school assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your parents meet your teachers and assess your work in school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your parents attend parent-teachers association meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your parents contribute to school improvement programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring Scheme

A score of three, two or one is given for the answer 'Always' 'Sometimes' and 'Never' respectively. The maximum possible score of this scale is 48.

Reliability and Validity

The reliability of the inventory was assessed using split half method, on a sample of 40 secondary school pupils. The obtained reliability coefficient was 0.91

Family Acceptance of Education Inventory was developed incorporating theoretical model of reputed psychological tests. The

theories used in the development of the scale, writing of statements, etc. are evidences to the construct validity of the inventory.

Concurrent validity was established by correlating the scores of the family integration inventory using a sample of 40 secondary school pupils. The obtained coefficient of validity was 0.45.

3.3.7.3. Family Cultural Level Inventory

This scale developed by Nair and Nirmala Devi measures the family cultural level of secondary school pupils. This scale helps us to evaluate the cultural background of one's family. This scale has thirteen questions. Each question helps to get an idea of the total cultural background of one's family. There is no time limit for this test.

For each item three alternatives are given. For the first seven items, the three possible answers are 'Many', 'Few', and 'None'. For the next six items the possible answers are 'Always', 'Sometimes' and 'Never'. The subject has to respond each item by entering a tick mark in the appropriate square.

Some of the items used in this inventory are given as examples.

	Many	Few	None
Number of newspapers purchased by your family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of libraries to which you/your family members are a member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Always	Sometimes	Never
You are corrected when you are speaking inappropriate words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You are instructed to read newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring Scheme

Three scores are given for the tick mark in the first squares, two scores for the second square, and one for the last square. The maximum possible score of this scale is 42.

Reliability and Validity

The reliability of the scale was assessed using split half method, on a sample of 40 secondary school pupils of Standard X. The obtained reliability was 0.65.

Family Cultural Level Inventory was constructed incorporating the theoretical model adopted in reprinted psychological tests like Minnesota Counselling Inventory, California Psychological Inventory, Family Climate Inventory. The theories used in the development of the scale, selection of items, etc. are evidences to prove the construct validity of the scale. The scale showed content validity when a logical analysis was made of the scale items. Concurrent validity was established by correlating the scores of the scale with an external criterion. Viz., scores of the Family

Integration Inventory using a sample of 40 secondary school pupils of standard IX. The obtained validity was 0.85.

3.3.7.4. Family Environment Index Inventory

This inventory developed by Nair and Nirmala Devi measures the cultural level of the Family Neighbourhood of secondary school pupils. This inventory has fourteen statements. Each of this helps to give an idea of the cultural level of the family neighbourhood.

Some of the items used in the inventory are given below:

	Many	Few	Nil
Number of Educated Families around your home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of people in the area holding top jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of cultural and social organisation in the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of libraries/reading rooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of Community hall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possibility of help from neighbours for studies and social activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring Scheme

For each statement there are three possible answers, viz. 'Many', 'Few' and 'Nil'. The scores three, two and one are given for answers

'Many', 'Few' and 'Nil' respectively. The maximum possible total score of the inventory is forty two.

Reliability and Validity

The reliability of the inventory was assessed using split half method on a sample of 40 secondary school pupils. The obtained reliability was .45.

Family environment index inventory was developed incorporating the theoretical model adopted in reputed psychological tests. The theories used in the development of the scale, selection of items etc. are evidences to prove the construct validity of the scale. Concurrent validity was established by correlating the scores of the inventory with an external criterion, viz. scores of the family integration inventory using a sample of 40 secondary school pupils. The obtained validity was 0.78.

A specimen copy of the inventory is given as Appendices VII & VII(a).

3.3.8. Kerala Socio-Economic Scale

The scale is developed by Nair (1980). The Kerala Socio-Economic Scale is intended for measuring the variables like Parental Education Level, Parental Occupation Level, Parental Income Level and Socio-Economic Status of Parents.

This scale has five sections. Section one is to give the biophysical data of the subject like name of pupils, location of school, age, sex, religion, caste, number of elders, number of youngsters, etc. Section two deals with information on education level of parents and siblings of the family. The third Section deals with occupation level of parents. The fourth section deals with the income of parents and in the fifth section there is a provision for entry of school examination marks in all the subjects.

The score for the three components when added will yield a score of 'Socio Economic Status' for each subject.

The Kerala Socio Economic Scale was developed in 1980. But the socio economic position of Kerala during data collection is entirely different from that period. Hence the investigator modified the weightage given to the three attributes of the scale based on the 'scale of social position' developed by Sumangala and Thampuratty during 1992.

The details of the scoring scheme is given as Table 7.

A copy of the tool is given as Appendix VIII.

Table 7

Categories and the Respective Weightage of the Components of Socio Economic Scale (Modified)

Sl. No.	Education	Wts.	Occupation	Wts.	Income	Wts.
1	Standard I to IV	10	Unemployed	5	Below Rs.1000	5
2	Standard V to VII	15	Unskilled	10	Rs.1001-2000	10
3	Standard VIII to X	15	Semiskilled	15	Rs.2001-3000	15
4	Pre University[PDC/TTC	25	Skilled	20	Rs.3001-4000	25
5	B.A./B.Sc./B.Com./Engg.Diploma/etc	30	Semi-professional	25	Rs.4001-5000	30
6	M.A./M.Sc./M.Com./M.B.B.S./ M.Ed./LL.B/B.Sc.(Engg.)/Ph.D.	35	Professional	30	Above Rs.5000	35
			High Professional	35		

3.4. SAMPLE USED FOR THE STUDY

The primary purpose of research is to discover principles of a population that have universal application. But studying a whole population to arrive at generalisation is not practical and impossible. Here lies the importance of sampling in the field of research. The process of sampling makes it possible to draw valid inferences or generalisation on the basis of careful observation of the variables with a relatively small proportion of the population. For the sample to be a representative of the population (secondary school pupils) for the present study the investigator decided the following:

(i) To have a very large sample

For the study the investigator has to identify sufficient number of High Creative and Low Creative Underachievers for analysis. Underachievers having high creative talent is typical and will be very low in number in any normal strata of society. With this assumption it was decided to take a very large sample for the study. Besides, when the sample is very large, the sampling distribution of mean will be normal.

(i) To select samples from four districts of Kerala

To represent different socio-cultural background of Kerala, the investigator decided to select samples from four districts of Kerala, viz., Malappuram, Thrissur, Ernakulam and Idukki.

(iii) To give equal representation to boys and girls in the sample.

The sex of the student has an important role in the selection of sample, because in many of the studies, it has been found that sex difference exists in many of the variables like achievement and other psychological traits of secondary school pupils. Therefore the investigator decided to give equal representation to both boys and girls in the basal sample. As there are single sex schools and co-education schools in our state, it was decided to take boys schools, co-educational schools and girls schools in the ratio 1:2:1.

(iv) To give representation to local e of the school in the ratio 2:1

The schools of the state are widely scattered in the rural and urban areas and in the case of instructional efficiency, wide difference exists between them. Therefore based on the locale of the school investigator wished to have school from the rural and urban areas. Those schools which are situated under panchayat administration are grouped as rural and those under municipality or corporation administration as urban. The number of schools in rural area is greater than that in the urban area and hence the proportion of 2:1 is taken for the selection of rural and urban schools.

(v) To give representation to type of management of schools in the ratio 3:2

As far as management of schools are concerned there are two types of schools in our states---schools owned by the State Government and private parties. Academic environment of these two types are different. This in turn influences the achievement of the students in a considerable way. Since there are more private schools than Government schools in the state it was decided to select schools based on type of management in the ratio of 3:2 between private and government schools.

(vi) To give representation to instructional efficiency of the schools in the ratio 1:2:1

The percentage in the S.S.L.C. Examination vary between schools. Based on the pass percentage, in the S.S.L.C. examination, schools were categorised as Above Average, Average and Below Average and was decided to select these schools in the ratio 1:2:1.

Details of the basal sample so considered is given in Table 8.

Table 8
Break up of the Initial Sample

Locale	School efficiency	Sex of students		Total
		Boys	Girls	
Urban	Above Average	40	40	80
	Average	80	80	160
	Below Average	40	40	80
Rural	Above Average	70	70	140
	Average	140	140	280
	Below Average	70	70	140
Total		440	440	880

3.5. DATA COLLECTION PROCEDURE AND CONSOLIDATION OF DATA

Administration of the test

After deciding upon the sample, the investigator contacted the heads of the selected institutions through the heads of the Department of Education, University of Calicut. After obtaining the permission from the Heads of schools a time schedule was fixed for testing. The investigator personally administered all the tests with the assistance of the staff members of the school. The instructions of the test was strictly followed to create an ideal test condition. In the administration of tools a uniform procedure was adopted throughout the selected schools.

Scoring of Data

Scoring of the response sheet were done as per the scoring scheme of each test. Punched scoring keys were also used for scoring. The scores were then tabulated for statistical analysis.

Final Sample

Though the test was administered to 880 pupils, the response sheets of 175 were rejected because of incomplete answers and non-availability of all scores for the same pupils. The sample size for statistical analysis thus reduced to 715. The break up of the final sample is given in Table 9.

Table 9

Break up of the Final Sample

Locale	School efficiency	Sex of students		Total
		Boys	Girls	
Urban	Above Average	36	29	65
	Average	50	52	102
	Below Average	25	32	57
Rural	Above Average	60	65	125
	Average	112	124	236
	Below Average	59	62	121
Total		342	373	715

The details of the Final sample selected is given as Appendix IX.

3.6. CONSOLIDATION OF DATA

The scores obtained in all tests along with the personal data, for the final sample, were then consolidated and tabulated on consolidation sheets for the purpose of analysis. Data concerned of each student was entered in the same line following a specific order.

3.7. IDENTIFICATION OF UNDERACHIEVERS IN MALAYALAM

Underachievers in Malayalam have been identified by using the following procedure.

Steps

- (i) **Developed a simple regression equation for predicting Achievement in Malayalam based on Intelligence (Verbal and Normal)**

The regression equation is of the form

$$Y' = \bar{Y} + r \frac{\sigma_y}{\sigma_x} (X - \bar{X})$$

where

Y' = Predicted score of Achievement in Malayalam

X' = Intelligence (Verbal and Non-Verbal)

\bar{Y} = Arithmetic mean of Achievement in Malayalam

- (ii) Using the above equation, estimated all Y' values for each obtained values of X in the case of whole sample.

- (iii) Estimated the standard error of estimate of Y by means of the formula.

$$SE_{y.x} = \sigma_y \sqrt{1 - r^2_{xy}}$$

- (iv) Then found the value of

$$Y' + SE_{y.x} \text{ and}$$

$$Y' - SE_{y.x}$$

- (v) Checked whether a particular obtained Y is greater than $Y' + SE_{y.x}$ or less than $Y' - SE_{y.x}$. If Y is less than $Y' - SE_{y.x}$ then that individual is identified as an underachiever for the study. Thus located all such individuals in the sample and that group was treated as the group of underachievers in Malayalam.

3.8. CLASSIFICATION OF UNDERACHIEVERS IN MALAYALAM INTO HIGH CREATIVE GROUP (HCUA) AND LOW CREATIVE GROUP (LCUA)

The group of Underachievers in Malayalam was classified into High Creative Group and Low Creative Group using Median score of Creativity as the cut off point. That is, an Underachiever was labelled as High Creative if he gets a score in Creativity above its median and labelled an individual as Low Creative Underachiever if he gets a score in creativity less than the median score of creativity.

Thus derived the two groups High Creative underachievers and Low Creative Underachievers with sizes as 56 and 67 respectively.

3.9. STATISTICAL TECHNIQUES USED FOR ANALYSIS

All the statistical computations were done with the help of a computer. The objectives of the study warranted the use of the following techniques for analysis.

a) Descriptive statistics

Descriptive statistics like mean, standard deviation, skewness, kurtosis, and coefficient of correlation and standard error were worked out for the total sample.

i. Mean (Best and Kahn, 1989)

In computing arithmetic mean, the basic formula is,

$$M = \frac{\sum X}{N}$$

Where 'N' is the size of the sample and 'X' the individual raw scores.

ii. Standard Deviation (Best and Kahn 1989)

To compute standard deviation, the formula used is,

$$SD, \sigma = \frac{1}{N} \sqrt{N \sum X^2 - (\sum X)^2}$$

(iii) Pearson's product moment coefficient of correlation.

When X and Y are two continuous interval variables, then

$$r = \frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2] [N \sum Y^2 - (\sum Y)^2]}}$$

To interpret each 'r' the used statistical techniques are,

- (i) Test of significance of the correlation by Fisher's t-test

This is done by checking whether the 't' value obtained by the formula

$$t = \frac{r \sqrt{N - 2}}{\sqrt{1 - r^2}}$$

exceeds 1.96 or 2.58, for significance at 0.05 level and 0.01 level respectively, where 'r' is the obtained correlation coefficient of each case.

- (ii) The 0.99 confidence interval of 'r'

0.99 confidence interval of 'r' was estimated using the formula, $(r \pm 2.58 \text{ SEr})$ in which SEr is the standard error of 'r'

$$\text{SEr} = \frac{\sqrt{1 - r^2}}{\sqrt{N - 1}}$$

'r' being the obtained coefficient of correlation.

- (iii) Verbal descriptions (Garrett, 1966)

'r' from 0.00 ± 0.20 indifferent or negligible

'r' from ± 0.20 to ± 0.40 low or slight relation

'r' from ± 0.40 to ± 0.70 substantial or marked relationship

'r' from ± 0.70 to 1.00 high to very high relationship

(iv) Shared variance

This is estimated by finding $r^2 \times 100$, r being the obtained correlation coefficient.

b. Inferential statistics

- i. The two tailed test of significance of difference between means of large independent samples (Best, 1986)

$$t = \frac{M_1 - M_2}{\sqrt{\sigma_1^2/N_1 + \sigma_2^2/N_2}}$$

Where,

M_1 = the mean of the first group

M_2 = The mean of the second group

σ_1 = Standard deviation of the first group

σ_2 = Standard deviation of the second group

N_1 = Size of the sample of the first group

N_2 = Size of the sample of the second group.

The difference between mean is said to be significant depending upon whether the 't' value exceeds ± 1.96 at 0.05 level or ± 2.58 at 0.01 level of significance.

Factor Analysis

Factor analysis refers to a variety of statistical techniques where common objective is to represent, a set of variables in terms of a smaller number of hypothetical variables. It is usually applied to data where no distinction between dependent and independent variables is possible. Concern is with the study of interdependencies and the discovery of structure among interdependencies.

In general, the first step of the analysis involves an examination of the inter relationships among these variables. Suppose that we use the correlation coefficient as a measure of association and have prepared a table of correlation. Inspection of the correlation matrix may show that there are positive relationships among these variables, and that the relationships within some subsets of variables are higher than those between other subsets. A factor analytic approach may then be used to address whether these observed correlation can be explained by the existence of a smaller number of hypothetical variables. That is factor analysis can be used as an expedient way of ascertaining the minimum number of hypothetical factors that can account for the observed covariation.

There are a number of procedures for factor analysis. All of them start with the same kind of data, a correlation matrix, though some of

them can also use a matrix of covariances. Main procedures for extracting factors are the method of principal components, method of principal axes, method of summation and the centroid method. In addition to the process of extracting factors, Thurstone (1947) has provided rotation methods which he insists are necessary for arriving at meaningful factors.

The basic factor analytic model is that a score of individual 1 as a variable j can be conceptualised as the weighted sum of scores on a smaller number of derived variables, called factors. This is a linear model and may be expressed in standard-score form as

$$Z_{ji} = a_{j1} F_{1i} + a_{j2} F_{2i} + \dots + a_{jm} F_{mi} + d_j U_{ji}$$

The quantity Z_{ji} is the standard score of individual i on variable j and F_{mi} is the standard score on the m^{th} common factor. U_{ji} is the standard score of individual i on a 'unique' factor (a factor that is involved in a single variable only, in this case variable j) The coefficients $a_{j1}, a_{j2} \dots a_{jm}$ are factor loadings. The coefficient d_j is the weight which attaches to the unique factor score.

The above equation expresses a standard score Z_{ji} as a linear function of weighted factor scores. Alternatively, the model may be written in a form which expresses the variable Z_j as a linear function of weighted factors, the factors being viewed as variables.

$$Z_j = a_{j1} F_1 + a_{j2} F_2 + \dots + a_{jm} F_m + d_j U_j$$

Where

$a_{j1}, a_{j2}, \dots, a_{jm}$ are factor loadings and F_1, F_2, \dots, F_m are the factor variables. For a set of n variables this model may be written as

$$Z_1 = a_{11} F_1 + a_{12} F_2 + \dots + a_{1m} F_m + d_1 U_1$$

$$Z_2 = a_{21} F_1 + a_{22} F_2 + \dots + a_{2m} F_m + d_2 U_2$$

.....

$$Z_n = a_{n1} F_1 + a_{n2} F_2 + \dots + a_{nm} F_m + d_n U_n$$

Such an arrangement is called a factor pattern.

In this study, investigator used the principal components method by Hotelling (1933). This method is more rigorous mathematically and can be applied completely objectively. Principal components are linear combinations of observed variables, possessing properties such as being orthogonal to each other, and the first principal component representing the largest amount of variance in the data. The second representing the second largest and so on. It often considers variance of common factors, but more accurately they are contrasted with common factors which are hypothetical.

The method frequently lead to factors by which one can account for obtained scores and inter correlation but which are difficult to interpret

psychologically. The result also lack invariance, in the sense that they depend upon what particular tests are analysed together.

(a) Test of significance of obtained factors

Factor analysis normally yields several factors. Usually the obtained factors (it is used to obtain as many factors as there are variables in the study) have to be tested for significance and only the significant factors are retained for final interpretation. In order to choose significant factors, alternate methods are available of which the method investigator used is the Humphery's rule.

This criterion takes into account N , the size of the sample, and is dependent on the loadings of only two variables (which should be sufficient to establish a factor) rather than on the entire matrix.

The steps re as follows:

- (i) Find the product of the two highest loadings in a column of the factor matrix.
- (ii) Find the standard error of a correlation coefficient of zero, for the type of correlation and size of sample being used.

(eg: \sqrt{N} for the Pearson's product moment correlation coefficient 'r' of a sample size N)

- (iii) If the product found in step (i) above does to exceed twice the standard error found in step (ii) the factor is probably significant.

(b) Rotation of the significant factors

The obtained factors are rotated to see the resulting factor structure lends itself to meaningful psychological interpretation. Both analytical and graphical method, are available for factor rotations.

For this study the investigator rotated the significant factors by the Varimax method with the help of the computer package SPSS. Both graphical and analytical methods involve essentially the same idea the rotation of reference axes to a new position from the one that is obtained through factor analysis to obtain the most parsimonian description of the resulting factors.

c) Interpretation of factors

After the rotated factor loadings have been obtained, the next step is to identify the content and the nature of the factors. This is done by inferring what the test with high loadings on a factor have in common that is present to a lesser degree in tests with moderate loadings and absent from tests with zero or near with zero loadings.

d) Criteria used for identification of factors

The following criteria were used for identifying the factors

- (i) Locate the group of variables on which the factor has the highest loadings.
- (ii) locate the group of variables on which the factor has the lowest loadings.
- (iii) Examine the possibility of different factors becoming independent (because of the orthogonality associated with the factors).
- (iv) Treat factor loadings with absolute values greater than 0.30 as significant and other factor loadings as not significant.

In determining the degree of presence of each variable in a factor, the below mentioned criteria have been used. These are:

- (i) Factor loading above 0.90 extremely presence of the variable.
- (ii) Factor loading between 0.70 and 0.90 very high presence of variable.
- (iii) Factor loading between 0.55 and 0.69 variable somewhat present.
- (iv) Factor loading between 0.40 and 0.54
- (v) Factor loading between 0.30 and 0.39 variable present slightly.
- (vi) Factor loading below 0.29 presence negligible.

Negative loadings are considered to show negative presence of a variable or the presence of a traits which is the opposite of the variable indicated.

ANALYSIS

E. S. Ramesan “Achievement motivation, attitude towards Malayalam and some social-familial variables differentiating between high-, and low-creative underachievers in Malayalam among secondary school pupils of Kerala”
Thesis. Department of Education , University of Calicut, 2000

ANALYSIS

Hypotheses
Objectives
Preliminary Analysis
Test of Significance of Differences in the
Mean Scores of the Variables
between Groups HCUA and LCUA
Estimation of the Extent of Relation of the
Predictor Variables with Creativity
and Achievement in Malayalam
Factor Structure of HCUA and LCUA in
Malayalam
Comparison of the Factor Structure of
HCUA and LCUA in Malayalam
Discriminant Function of the Predictor
Variables
Summary of Results
Tenability of Hypotheses

ANALYSIS

This chapter gives the details of analysis and the discussion of results which were done with reference to the hypotheses and hence of the objectives of the study. The hypotheses and objectives of the study are therefore restated below.

HYPOTHESES

The study was designed with the major hypothesis that each of the select predictor variables will discriminate significantly between High-, and Low-Creative Underachievers in Malayalam.

The investigator set the following sub hypotheses, the testing and results of each of which evidences the validity of the above major hypothesis. The sub hypotheses set are,

1. The mean scores of the select predictor variables will be significantly different between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam.
2. The predictor variables will have significant relationship with
 - (i) Creativity
 - (ii) Achievement in Malayalam

3. The factor structures of HCUA and LCUA will be different in terms of
 - (i) Number of factors
 - (ii) Presence or absence of the input predictor variables in the factors
 - (iii) Percentage of variance accounted for the factors.
4. Different combinations of variables exists by which groups HCUA and LCUA differ.

OBJECTIVES

The present study was done with the following objectives.

1. To compare the mean scores of the select predictor variables between groups HCUA and LCUA in Malayalam.
2. To estimate the nature and extent of relationship of creativity and of Achievement in Malayalam with each of Achievement Motivation, Attitude towards Malayalam and the select Social-Familial variables.
3. To derive and compare the Factor Structure of High and Low Creative Underachievers in Malayalam.
4. To know the combination of Predictor variables which helps to discriminate between groups HCUA and LCUA in Malayalam.

Details of the statistical analysis which were done to test the hypotheses stated earlier are presented in this chapter under the following headings.

1. Preliminary Analysis to know the extent of Underachievers in Malayalam and the normality of criterion variables.
2. Test of significance of difference in the mean scores of the select predictor variables between HCUA and LCUA in Malayalam.
3. Relationship of the select predictor variables with
 - (i) Creativity
 - (ii) Achievement in Malayalam
4. Factor Structures of HCUA and LCUA in Malayalam.
5. Combination of predictor variables discriminating between groups HCUA and LCUA in Malayalam.

The details of analysis are as follows.

4.1. PRELIMINARY ANALYSIS

As a preliminary to the entire statistical analysis the investigator estimated for the whole sample the essential basic statistics like mean,

standard deviation, standard error of mean, skewness and kurtosis of the two criterion variables of the study and are presented in Table 10.

Table 10

Summary of the Basic Statistics of the Criterion Variables

Sl. No.	Variables	Mean	S.D.	Standard Error of Mean	Skewness	Kurtosis
1	Creativity	68.639	31.446	1.76	0.974	1.075
2	Achievement in Malayalam	42.55	11.323	0.423	0.109	- 0.235

Table 11

Distribution of Over-, Normal- and Underachievers in Malayalam

Sl.No.		Number	Percentage
1	Over Achievers	121	16.92
2	Normal Achievers	471	65.87
3	Under Achievers	123	17.20
Total		715	100

Discussion of the Results

The basic statistics of the two variables Creativity and Achievement in Malayalam given in Tables 10 and 11 reveal the following.

- i. The sample drawn for the study is large ($N = 715$).
- ii. The distribution of Creativity is slightly positively skewed and is platykurtic as the index of skewness is greater than zero and the index of kurtosis is 1.075.
- iii. The distribution of Achievement in Malayalam is very slightly positively skewed and is leptokurtic to a small extent.
- iv. The standard deviation suggest that the scores of Creativity is more heterogeneous than that of Achievement in Malayalam.
- v. The very small standard errors of the mean scores of both the variables suggest that the sampling errors of the two variables are minimum.
- vi. Table 11 reveals that out of the 715 samples 123 are Underachievers, 471 are Normal achievers and 121 are Over achievers in Malayalam. That is, the extent of Under Achievers in Malayalam among the total sample is 17.20 per cent. The figures presented above thus reveals that the distribution of Achievement in Malayalam among the total sample is quite normal.

4.2. TEST OF SIGNIFICANCE OF DIFFERENCE IN THE MEAN SCORES OF THE PREDICTOR VARIABLES BETWEEN GROUPS HCUA AND LCUA IN MALAYALAM

The technique of two tailed test of significance of difference between the means of large independent samples was used to test the significance of difference in the mean scores of the select variables between HCUA and LCUA in Malayalam.

The essential statistics of the two groups and the results of the test of significance of difference in the mean scores of each variable between the two groups are presented in Table 12

Table 12
Two Tailed Test of Significance of Differences in the Mean Scores of the Predictor
Variables between High Creative Underachiever (HCUA) and Low Creative Underachievers (LCUA)

Sl. No.	Predictor Variables	HCUA (N = 56)		LCUA (N = 67)		Critical Ratio
		Mean	SD	Mean	SD	
1	Achievement Motivation	26.054	6.979	24.493	7.622	-1.23
2	Attitude Towards Malayalam	109.589	21.958	111.6418	15.554	0.60
3	Home Learning Facility	12.017	6.443	11.2687	4.227	-0.77
4	Family Acceptance of Education	37.464	6.021	37.1642	5.244	-0.30
5	Family Cultural Level	27.286	3.447	28.134	4.379	1.18
6	Family Environmental Index	29.250	4.656	30.629	4.976	0.89
7	Social Familial Index	106.089	13.195	106.597	12.908	0.22
8	Parental Education Level	20.446	8.106	20.970	7.748	0.37
9	Parental Occupation Level	26.518	17.189	19.905	12.950	-2.42*
10	Parental Income Level	20.357	11.235	15.895	11.212	-2.20*
11	Socio-Economic Status	72.946	33.300	56.791	22.792	-3.18**
12	Family Size	2.768	2.045	2.313	1.626	1.37
13	Birth Order	5.536	1.897	5.179	1.585	-1.14

Note: * indicates significant difference at 0.05 level

** indicates significant difference at 0.01 level

Discussion of Results

The critical ratio (t value) of the mean difference obtained between High Creatives Underachievers and Low Creative Underachievers reveal that significant difference in mean scores exists in the case of three out of thirteen select variables only (two variables at 0.05 level and one variable at 0.01 level). The three variables having significant difference between UCUA and LCUA are Parental Occupation Level, Parental Income Level and Socio Economic Status. The difference in the mean scores is significant as the critical ratios of the variables exceed 1.96 and 2.58, the limit set for significance at 0.05 and 0.01 levels. Thus the results suggest that these three variables are capable of differentiating between HCUA and LCUA groups.

The test used here is two tailed. Even though a two tailed test do not throw light on the direction of differences, from the higher means obtained for HCUA, it can be said that, Parental Occupation Level Parental Income Level, and Socio Economic Status of the High Creative Group is significantly better than those of Low Creative Underachiever group. This further suggest that these three familiar variables have a significant effect on the creativity of Underachievers in Malayalam.

The results given in Table 12 further suggests that the mean scores of the remaining ten predictor variables Achievement Motivation, Attitude towards Malayalam, Parental Education Level, Home Learning Facility, Family Acceptance of Education, Family Cultural Level, Family

Environmental Index, Social Familial Index, Family Size, Birth Order are not significantly different between HCUA and LCUA, as the critical ratios are -1.23, 0.60, 0.37, -0.077, 0.30, 1.18, 0.89, 0.22, -1.14 and 1.37 respectively. That is HCUA and LCUA groups are almost alike with regard to these ten predictor variables.

The results thus reveal that the hypotheses put forth by the investigator is valid only in the case of three out of the thirteen predictor variables.

4.3. ESTIMATION OF THE EXTENT OF RELATION OF THE PREDICTOR VARIABLES WITH CREATIVITY AND ACHIEVEMENT IN MALAYALAM FOR GROUPS HCUA AND LCUA

The degree and nature of relation of the select predictor variables with Creativity and Achievement in Malayalam were estimated both for the groups of HCUA and LCUA in Malayalam by means of Pearson's Product Moment Coefficient of Correlation 'r'. In using this certain basic assumptions are to be met which are the following:

1. The distribution of the criterion or dependent variable should be normal or at least not badly skewed.
2. The expected relationship between the two variables is to be rectilinear.

3. There should be homogeneity of variance or equal scattering of the two variables.

In the preliminary analysis the investigator found that the distribution of criterion variables are not badly skewed (from the indices of skewness).

Homogeneity of variance can be expected as large samples were made use of for estimating r 's. Besides the investigator expects a linear relation between the variables under estimation of ' r '. Hence the investigator proceeded with the technique of Pearson's ' r ' in estimating the relation of the predictor variables with Creativity and Achievement in Malayalam.

Discussion of ' r 's

For describing the nature of relationship the investigator estimated and used test of significance of ' r 's by means of Fisher's ' t ', 0.99 confidence interval and Shared Variance r^2 .

The above statistics of the predictor variables with two of the criterion variables (Creativity and Achievement in Malayalam) are presented in Tables 13 and 14 respectively.

Table 13

Summary of Pearson's 'r' between Creativity and the Select Predictor Variables for HCUA and LCUA groups

Sl. No.	Predictor Variables	High Creative Underachievers (HCUA)					Low Creative Underachievers (LCUA)				
		Coefficient of correlation 'r'	't' value of 'r'	Confidence interval		Shared Variance r ²	Coefficient of correlation r	't' value of r	Confidence Interval		Shared variance r ²
				Lower Limit	Upper limit				Lower limit	Upper limit	
1	Achievement Motivation	0.084	-0.620	0.262	0.429	0.700	0.001	0.012	-0.316	0.318	0.002
2	Attitude towards Malayalam	0.119	0.088	-0.224	0.462	1.418	-0.052	0.416	-0.368	0.265	0.265
3	Home Learning Facility	0.154	1.460	-0.186	0.499	2.380	-0.023	0.184	-0.295	0.340	0.051
4	Family Acceptance of Education	0.049	0.359	-0.297	0.396	-2.390	-0.032	0.257	-0.286	0.349	0.101
5	Family Cultural Level	0.147	1.086	-0.194	0.487	2.146	0.194	1.627	-0.115	0.499	3.770
6	Family Environmental Index	0.043	0.318	-0.304	0.391	1.870	0.029	0.239	-0.288	0.347	0.088
7	Social Familial Index	0.124	0.915	-0.219	0.467	1.530	0.083	0.669	-0.362	0.467	0.680
8	Parental Education Level	0.036	0.264	-0.312	0.384	0.128	0.233	1.926	-0.068	0.533	5.400
9	Parental Occupation Level	0.255	1.936	-0.071	0.580	0.649	0.174	1.420	-0.139	0.481	3.017
10	Parental Income Level	0.256	1.930	-0.069	0.581	6.550	0.108	0.871	-0.304	0.524	1.150
11	Socio-Economic Status	0.357**	2.800	0.053	0.660	12.700	0.231	1.890	-0.069	0.532	5.320
12	Family Size	0.063	0.466	-0.283	0.410	0.400	0.165	1.360	-0.145	0.473	2.700
13	Birth Order	0.104	0.766	-0.207	0.417	1.089	0.168	1.460	-0.141	0.477	2.800

Note : * indicates significant relationship at 0.05 level
 ** indicates significant relationship at 0.01 level.

Table 14

Summary of Pearson's 'r' between Achievement in Malayalam and the Predictor Variables for HCUA and LCUA groups

Sl. No.	Predictor Variables	High Creative Underachievers (HCUA)					Low Creative Underachievers (LCUA)				
		Coefficient of correlation 'r'	't' value of 'r'	Confidence interval		Shared Variance r^2	Coefficient of correlation 'r'	't' value of 'r'	Confidence Interval		Shared variance r^2
				Lower Limit	Upper limit				Lower limit	Upper limit	
1	Achievement Motivation	-0.102	0.746	-0.445	0.242	1.030	-0.040	-0.320	0.278	0.277	0.157
2	Attitude towards Malayalam	0.276*	2.107	-0.045	0.601	7.612	0.024	0.190	-0.291	0.338	0.056
3	Home Learning Facility	0.111	0.822	-0.225	0.455	1.230	0.131	1.06	-0.312	0.443	1.708
4	Family Acceptance of Education	0.044	0.324	-0.302	0.044	0.195	0.033	0.265	-0.284	0.349	0.384
5	Family Cultural Level	0.126	0.924	-0.216	0.467	1.570	0.211	1.73	-0.093	0.514	4.410
6	Family Environmental Index	0.069	0.504	-0.27	0.416	0.480	0.044	0.357	-0.273	0.361	0.196
7	Social Familial Index	0.137	1.017	-0.204	0.479	1.880	0.118	0.958	-0.195	0.433	1.390
8	Parental Education Level	0.084	0.623	-0.261	0.430	0.710	0.099	0.804	-0.215	0.414	0.984
9	Parental Occupation Level	-0.099	0.726	0.247	0.442	0.970	-0.028	-0.231	-0.347	0.288	0.082
10	Parental Income Level	0.179	1.34	-0.157	0.515	3.220	0.096	0.779	-0.218	0.410	0.925
11	Socio-Economic Status	0.096	0.705	0.249	0.660	0.915	0.065	0.523	-0.252	0.381	0.419
12	Family Size	0.040	0.299	-0.210	0.472	1.660	0.131	0.958	-0.180	0.443	1.390
13	Birth Order	0.112	0.828	-0.198	0.485	1.250	0.144	1.068	-0.168	0.454	1.720

Note: * Indicates significant relationship at 0.05 level.

The relationship of the select predictor variables with the two criterion variables Creativity and Achievement in Malayalam are explored statistically for groups HCUA and LCUA and the variable wise discussions are given below.

4.3.1. Relation of Achievement Motivation with Creativity and Achievement in Malayalam for groups HCUA and LCUA in Malayalam

The coefficient of correlation and other related statistics for meaningful interpretation are given in Table 15.

Table 15

Pearson's 'r' and Other Related Statistics
of Achievement Motivation with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.084	.62	-0.262	.429	.70	.001	.011	-.316	.318	.002
Achievement in Malayalam	-.102	.746	-.445	.242	1.030	-.040	-0.320	-.278	.277	.157

Discussion

The coefficient of correlations obtained between Achievement Motivation and Creativity for the groups HCUA and LCUA (shown in

Table 15) and the indices of the test of significance of 'r's suggest that the relation between the variables Achievement Motivation and Creativity is not significant to both the groups HCUA and LCUA in Malayalam.

The coefficient of correlation obtained between Achievement Motivation and Achievement in Malayalam for the groups HCUA and LCUA (in Table 15) and the indices of the tests of significance of 'r's suggests that this relation also is not significant either for group HCUA or for group LCUA

4.3.2. Relation of Attitude towards Malayalam with Creativity and Achievement in Malayalam of HCUA and LCUA

The coefficient of correlation, Fisher's 't', $CI_{0.99}$, and shared variance r^2 etc which are essential for meaningful interpretation are given below in Table 16.

Table 16

Pearson's 'r' and Other Related Statistics of Attitude towards Malayalam with Creativity and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.119	.088	-.224	.462	1.418	-.052	.416	-.368	.265	.255
Achievement in Malayalam	.276*	2.107	-.045	.601	7.612	.024	.190	-0.291	.338	0.056

Discussion of Results

The coefficient of correlations obtained between Attitude towards Malayalam and Creativity for the groups HCUA and LCUA (shown in Table 16) and the indices of the test of significance of the relation reveals that the relation between the variables is not substantial and not significant to both the groups HCUA and LCUA.

The coefficient of correlations obtained between Attitude towards Malayalam and Achievement in Malayalam for the groups HCUA and LCUA (Table 16) and the indices of the tests of significance of 'r's suggests that this relation is significant for the HCUA group but not significant for the LCUA group. The other statistical indices also support this view. The 0.99 confidence interval of this 'r' of HCUA is (-.045, 0.6008) which suggest that the population r of this group lies between the values -0.451 and .6008, the probability of this being 0.99. The percentage variance shared between the variables is 7.612. That is only 7.612 per cent of the variation in the variable Achievement in Malayalam is attributable to the variation in the variable Attitude towards Malayalam.

4.3.3. Relation of Home Learning Facility with Creativity and Achievement in Malayalam for groups HCUA and LCUA in Malayalam

The coefficient of correlation and other related statistics for meaningful interpretation for both groups are given in Table 17.

Table 17

Pearson's 'r' and Other Related Statistics
of Home Learning Facility with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.154	1.46	-0.186	.499	2.38	-.023	.184	-.295	.340	-.051
Achievement in Malayalam	.111	.822	-0.225	.455	1.23	.131	1.06	-.312	.443	1.708

Discussion of Results

The value of 'r' and other statistical indices stated in Table 17 reveals that the variable Home Learning Facility has no significant relation with Creativity for groups HCUA and LCUA in Malayalam.

The value of coefficient of correlation obtained between Home Learning Facility and Achievement in Malayalam for the groups HCUA and LCUA (shown in Table 17) and the indices of the test of significance of r's suggest that this relation is also not significant either for group HCUA or for group LCUA.

4.3.4. Relation of Family Acceptance of Education with Creativity and Achievement in Malayalam of HCUA and LCUA

The value of 'r' and other statistical indices required for significant interpretations are given in Table 18.

Table 18

Pearson's 'r' and Other Related Statistics
of Family Acceptance of Education with Creativity
and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	'r' value	0.99 Confidence Interval			'r'	'r' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.649	.359	-.297	.396	.239	.032	.257	-0.286	.349	.101
Achievement in Malayalam	.044	.324	-0.302	.044	.195	.033	.265	-0.284	.349	.384

Discussion of Results

As indicated in Table 18 the 'r' value and other statistical indices shows that relationship between the variable, Family Acceptance of Education and Creativity is not real or significant for both the groups HCUA and LCUA groups in Malayalam.

With regard to the variable Achievement in Malayalam, the results show low degree of correlation which are not significant. It means that the

variables Family Acceptance of Education and Achievement in Malayalam are not statistically related to both the groups HCUA and LCUA.

4.3.5. Relation of Family Cultural Level with Creativity and Achievement in Malayalam among HCUA and LCUA

The statistical indices like coefficient of correlation, Fisher 't' value, 0.99 confidence interval and shared variance etc for the fruitful interpretation of the results of 'r' with regard to groups HCUA and LCUA are given in Table 19.

Table 19

Pearson's 'r' and Other Related Statistics
of Family Cultural Level with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.147	1.086	-0.194	.487	2.146	.194	1.627	-0.115	.499	3.77
Achievement in Malayalam	.126	.924	-.216	.467	1.57	.211	1.73	-0.093	.514	4.41

Discussion of Results

Since the 'r' values and other statistical indices stated in Table 19 of variables Family Cultural Level and Creativity indicated Low degree of

correlation which is not significant, it reveals that the relationship between these variables is not real to the groups HCUA and LCUA.

The coefficient of correlation obtained between the variables Achievement in Malayalam and Family Cultural Level for the groups HCUA and LCUA (in Table 19) and the indices of the test of significance of r 's suggests that this relation also is not significant either for group HCUA or for group LCUA.

4.3.6. Relation of Family Environmental Index with Creativity and Achievement in Malayalam

The value of ' r ' and other statistical indices of groups HCUA and LCUA required for meaningful interpretation are given in Table 20.

Table 20

Pearson's ' r ' and Other Related Statistics
of Family Environmental Index with Creativity
and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	' r '	' t ' value	0.99 Confidence Interval			' r '	' t ' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance ' r '			Lower Limit	Upper Limit	Shared Variance ' r '
Creativity	.043	.318	-0.304	.391	.187	.029	.239	.288	.347	.088
Achievement in Malayalam	.069	.504	-0.277	.416	.480	.044	.357	.273	.361	.196

Discussion of Results

The coefficient of correlation between the variables, Family Environmental Index and Creativity for the groups HCUA and LCUA (stated in Table 20) and the indices of the test of significance of 'r's suggest that the relation between the variables family Environmental Index and Creativity is not significant to both the groups HCUA and LCUA.

The coefficient of correlation obtained between Family Environment Index and Achievement in Malayalam for both groups HCUA and LCUA (in Table 20) and the indices of the test of significance of 'r' (stated in Table 20) suggests that this relation is also not significant either for group HCUA or for group LCUA.

4.3.7. Relation of Social Familial Index with Creativity and Achievement in Malayalam

The Pearson's 'r' and other relevant statistical indices is which are essential for the meaningful interpretation of the results of groups HCUA and LCUA are given in Table 21

Table 21

Pearson's 'r' and Other Related Statistics
of Social Familial Index with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.124	.915	-.219	.467	1.53	.083	.669	-.362	.67	0.68
Achievement in Malayalam	.137	1.017	-0.204	.479	1.88	.118	.958	-0.195	.433	1.39

Discussion of Results

The coefficient of correlation between the variables Social-Familial Index and Creativity (shown in Table 21) and the indices of test of significance of r's indicate that there is no significant relationship between the variables either for group HCUA or for group LCUA.

The value of 'r' and other statistical indices between the variables Social-Familial Index and Achievement in Malayalam as stated in Table 21 also indicate no significant relationship between these variables to both groups HCUA and LCUA.

4.3.8. Relation of Parental Education Level with Creativity and Achievement in Malayalam for groups HCUA and LCUA

The value of coefficient of correlation and other statistical indices essential for the meaning interpretation are given in Table 22

Table 22

Pearson's 'r' and Other Related Statistics
of Parental Education Level with Creativity
and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.036	.264	-.312	.384	.128	.233	1.926	-0.068	.533	5.4
Achievement in Malayalam	.084	.623	-0.261	.430	.710	.099	.804	-0.215	.414	.984

Discussion of Results

The value of 'r' and other statistical indices stated in Table 22 reveals that this variable Parental Education level has no significant relation to Creativity for groups HCUA and LCUA.

The value of coefficient of correlation obtained between Parental Education Level and Achievement in Malayalam for the groups HCUA and LCUA (shown in Table 22) and the indices of the test of significance of

r's suggest that this relation also is not significant either for group HCUA or for group LCUA.

4.3.9. Relation of Parental Occupation Level with Creativity and Achievement in Malayalam for groups HCUA and LCUA

The value of 'r' and other statistical indices required for significant interpretations are given in Table 23

Table 23

Pearson's 'r' and Other Related Statistics
of Parental Occupation Level with Creativity
and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.255	1.936	-.071	.580	.649	.174	1.42	-.139	.481	3.017
Achievement in Malayalam	.099	.726	-.247	.442	.97	-.028	-0.231	-0.347	0.288	0.082

Discussion of Results

The Table of results reveal that the statistical indices on the relation of Parental Occupation level with Creativity is not significant for Groups HCUA and LCUA in Malayalam.

The coefficient of correlation obtained between Parental Occupation level and Achievement in Malayalam for groups HCUA and LCUA (in Table 23 and the indices of the tests of significance of 'r's suggests that this relation also is not significant either for group HCUA or for group LCUA.

4.3.10. Relation of Parental Income Level with Creativity and Achievement in Malayalam for groups HCUA and LCUA in Malayalam

The coefficient of correlation of the variable Parental Income Level with Creativity and Achievement in Malayalam and the 't' values, the confidence intervals and r^2 of HCUA and LCUA are given in Table 24.

Table 24

Pearson's 'r' and Other Related Statistics
of Parental Income Level with Creativity
and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.256	1.94	-.069	.581	6.55	.108	.871	-0.304	.524	1.15
Achievement in Malayalam	.179	1.34	-0.157	.515	3.22	.096	.779	-0.218	.410	.925

Discussion of Results

The results stated in Table 24. reveals that there is no significant relationship between Parental Income level and Creativity either for group HCUA or for group LCUA in Malayalam.

The value of 'r' obtained between Parental Income Level and Achievement in Malayalam for groups HCUA and LCUA (shown in Table 24) and the indices of tests of significance of 'r's suggest that the relation between the variables Parental Income Level and Achievement in Malayalam is not significant to both the groups HCUA and LCUA.

4.3.11. Relation of Socio Economic Status with Creativity and Achievement in Malayalam for groups HCUA and LCUA

The statistical indices like coefficient of correlation, 't' value, confidential interval, and shared variance etc. for the fruitful interpretation of r are given below.

Table 25

Pearson's 'r' and Other Related Statistics
of Socio Economic Status with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	'r' value	0.99 Confidence Interval			'r'	'r' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.357**	2.8	.053	.660	12.70	.231	1.89	-0.069	.532	5.32
Achievement in Malayalam	0.096	0.705	-0.249	.441	0.915	0.645	0.523	-0.252	.381	0.419

** indicates significance of r at .01 level.

Discussion of Results

The coefficient of correlations obtained between Socio-economic Status and Creativity for group HCUA and LCUA (Shown in Table 25) and the indices of tests of significance of r's suggests that the relation between the variables Socio-economic Status and Creativity is significant and substantial to group HCUA but not significant to LCUA group.

The coefficient of correlations obtained between Socio-economic Status and Achievement in Malayalam for groups HCUA and LCUA (in Table 25) and the indices of the tests of significance of r's suggests that this relation is not significant for groups HCUA and LCUA.

4.3.12. Relation of Family Size with Creativity and Achievement in Malayalam for groups HCUA and LCUA in Malayalam

The coefficient of correlation 'r' between the variables Family Size and Creativity, Fisher's 't' values, 0.99 Confidence Interval and the shared variance computed for the meaningful interpretation of results of both HCUA and LCUA are given in Table 26

Table 26

Pearson's 'r' and Other Related Statistics of Family Size with Creativity and Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.063	.466	-0.283	.410	.40	.165	1.36	-.145	.473	2.70
Achievement in Malayalam	.040	.299	-.210	.472	1.66	.131	.958	-.180	.443	1.39

Discussion of Results

The coefficient of correlation between the variables Family Size and Creativity for the groups HCUA and LCUA (stated in Table 26) and the indices of the test of significance of 'r's' suggest that this relation between the variables is not significant to both the groups HCUA and LCUA.

The coefficient of correlation obtained between Achievement in Malayalam and Family size for the groups HCUA and LCUA (stated in Table 26) and the indices of the test of significance of 'r's suggests that this relation also is not significant either to group HCUA or to group LCUA.

4.3.13. Relation of Birth Order with Creativity and Achievement in Malayalam for groups HCUA and LCUA in Malayalam

The computed coefficient of correlation, Fisher's 't' value, 0.99 confidence interval and shared variance required for meaningful interpretation of the results of r for both HCUA and LCUA groups are given in Table 27.

Table 27

Pearson's 'r' and Other Related
Statistics of Birth Order with Creativity and
Achievement in Malayalam of Groups HCUA and LCUA

Criterion Variables	HCUA (N = 56)					LCUA (N = 67)				
	'r'	't' value	0.99 Confidence Interval			'r'	't' value	0.99 Confidence Interval		
			Lower Limit	Upper Limit	Shared Variance 'r'			Lower Limit	Upper Limit	Shared Variance 'r'
Creativity	.104	.766	-0.207	.417	1.089	.168	1.46	-.141	.477	2.80
Achievement in Malayalam	.112	.828	-0.198	.485	1.25	.144	1.068	-.169	.454	1.72

Discussion of Results

As indicated in Table 27 the 'r' value and other statistical indices of Birth Order and Creativity shows that there is no significant relationship between these variables to group HCUA or to group LCUA.

The value of 'r' between the variables Birth Order and Achievement in Malayalam (stated in Table 27) and the value for the test of significance of 'r' reveals that there is no significant relationship between the variables Birth Order and Achievement in Malayalam to both groups HCUA and LCUA.

4.4. FACTOR STRUCTURE OF HCUA AND LCUA IN MALAYALAM

Statistical analysis was done to derive the Factor Structure of HCUA and LCUA groups and to see whether there is considerable difference in the two factor structures due to the select predictor variables. The method adopted for this is Principal Component Method of Factor analysis followed by Varimax Rotation.

The rotated factor structures are interpreted for their nature and content, using conventional procedures described in the previous chapter. To facilitate interpretations, the rotated factors are diagrammatically represented. Each factor is then labelled based on the following rules of presence or absence of the variables in the factor.

- a) Locating the groups of variables for which the factor has high loading.
- b) Locating the group of variables for which the factor has low loading.
- c) Ensuring the possibility of different factors becoming independent.
- d) Treating (i) Factor loadings above 0.30 as significant.
 - ii) Factor loadings greater than 0.90 as extremely high presence of the variables.
 - iii) Factor loading between 0.70 and 0.90 as high presence of the variables.
 - iv) Factor loadings between 0.55 and 0.69 as considerable presence of variables.
 - v) Factor loadings between 0.40 and 0.54 as presence to some extent of the variables.
 - vi) Factor loadings between 0.30 and 0.39 as low presence of the variables.

4.4.1. The Factor Structure of HCUA in Malayalam based on the select Predictor Variables

The basic input data for extracting factor structure is correlation matrix of the select predictor variables. This data of HCUA is given in Table 28

The unrotated and rotated factor matrices along with the respective communalities (h^2) of the HCUA are presented as Table 29

The schematic representation of the obtained factors is given as Figure 1 to facilitate the description of the factors.

Table 28
Correlation Matrix of the Predictor Variables of HCUA

Sl. No.	Predictor Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Achievement Motivation	1.000												
2	Attitude towards Malayalam	.1153	1.000											
3	Home Learning Facility	.2828	.2324	1.000										
4	Family Acceptance of Education	-.0041	.1774	.2932	1.000									
5	Family Cultural Level	.2117	-.0335	.1864	.2992	1.000								
6	Family Environmental Index	.1048	.0771	.1459	.2014	.0963	1.000							
7	Social Familial Index	.2307	.2160	.7196**	.7281**	.5207**	.5397**	1.000						
8	Parental Education Level	.0638	-.0081	-.0106	.0658	-.0307	-.0729	-.0590	1.000					
9	Parental Occupation Level	.0030	.0142	.0121	-.1001	.0769	.0940	.0194	.1712	1.000				
10	Parental Income Level	.0055	.2386	.3490*	.2515	.0748	.1164	.3456*	.2827**	.5480**	1.000			
11	Socio Economic Status	.0830	.0198	.1739	-.1144	-.0740	.0931	.0623	.4733**	.7609**	.6872	1.000		
12	Family Size	.2134	-.0858	-.1377	.0813	.0373	.0298	-.0085	.0196	.1001	-.1243	.0926	1.000	
13	Birth Order	.2965	-.0427	-.0411	.1271	.0354	.0234	.0584	-.0376	.0878	-.0755	.1197	.8977**	1.000

Table 29

Unrotated and Rotated Factor Matrix of Predictor Variables for Group HCUA

Sl. No.	Predictor Variables	Unrotated Factors						Rotated Factors					
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	h^2	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	H^2
1	Achievement Motivation	.50037	-.20090	-.16827	.57976	.33437	.76687	.29008	-.02825	-.11786	.81732	.00447	.76687
2	Attitude towards Malayalam	.31368	.33269	-.14710	.40225	-.57265	.71977	-.06763	.06017	.20767	.24357	.78046	.71977
3	Home Learning Facility	.53018	.42102	-.30480	.27861	.05990	.63246	-.19765	.112368	.35688	.63039	.23139	.63246
4	Family Acceptance of Education	.52422	.16740	-.41940	-.36152	-.14783	.63128	.04722	-.01009	.77901	.14428	.03569	.63128
5	Family Cultural Level	.42455	.07555	-.29770	.27494	.64109	.76116	-.05121	.05669	.41611	.453411	-.61368	.76116
6	Family Environmental Index	.36170	.12809	-.19997	.35618	-.16391	.34095	-.5100	.07681	.57560	-.02114	.02616	.34095
7	Parental Education Level	.13667	.15227	.57156	.28785	.25996	.51899	-.02483	.56307	-.39449	.21066	-.03640	.51899
8	Parental Occupation Level	.37855	.18284	.70886	-.25156	.02998	.74339	.13179	.83565	.05495	-.13481	-.08070	.74339
9	Parental Income Level	.53985	.56146	.44852	-.09009	-.10220	.82640	-.14452	.81385	.29201	.11481	.21146	.82640
10	Family Size	.45270	-.82380	.15794	-.05877	-.13997	.93162	.96247	.01361	.03857	.01296	-.05862	.93162
11	Birth Order	.52168	-.79236	.09665	-.00433	-.15927	.93487	.95803	-.00149	.07971	.10336	.00269	.93487
								2.01808	1.7088	1.5474	1.4381	1.0972	
Percent Variance of the Factors								25.87%	21.90%	19.83%	18.44%	14.06%	100.10%

4.4.2. Discussion of the Factor Structure of the group HCUA

The unrotated and rotated factor matrices suggest that to HCUA there are five significant factors underlying the thirteen predictor variables of the study

Nature of Factors

Factor 1:

Only two variables have significant loadings in this factor and these are,

	Factor Loadings
(i) Family size	(0.9625)
(ii) Birth order	(0.958)

The very high loadings to the two variables suggests the extremely high presence of the variables in the factor. None of the remaining eleven variables have significant loading on this factor. This suggest that these two variables help to describe the nature of this factor. This factor is also characterised by the slight absence (as the loadings are negative) of variables like Attitude towards Malayalam, Home Learning Facility, Parental Income Level, Family Acceptance of Education, Family Cultural Level and Parental Education Level. This significant factor with extreme

presence of the variables Family Size and Birth Order is therefore labelled as 'Birth Status'.

This is a dominant factor which accounts for nearly 26% of the variance of the battery of the thirteen predictor variables.

Factor 2

This factor has significant loadings on three social familial variables as indicated below.

Very high presence

	Factor Loadings
(i) Parental Occupation Level	(0.8356)
(ii) Parental Income Level	(0.9135)

Considerable presence

Parental Education level	(0.5630)
--------------------------	----------

The remaining variables have no significant loading on this factor. The factor loadings suggests that these three variables help to describe the nature of this factor. Considering the extent of presence, this factor could be labelled as 'Parental OIE Status'.

This also is a dominant factor accounting for nearly 21 (twenty one) percent of the variance of the battery of the thirteen predictor variables.

Factor 3

This factor has significant loadings on five variables and are as given below.

	Factor Loadings
a) <u>Very high presence</u>	
Family Acceptance of Education	(0.576)
b) Considerable presence	
Family Environmental Index	(0.576)
c) Presence to some extent	
Family Cultural Level	(0.416)
d) Low presence	
Home Learning Facility	(0.357)
e) Slight Absence	
Parental Education Level	(-0.394)

None of the remaining eight variables have significant loading on this factor. The factor loadings of the variables suggest that the first 3 (three) variables help to describe the nature of this factor. The factor loadings also suggests that the variable Parental Education level is slightly

absent in the factor. This factor is therefore labelled as 'Familial Attitude to Education'.

This factor accounts for nearly 20 (twenty) per cent of the variance of the battery of the thirteen predictor variables.

Factor 4

This factor has significant loadings on 3 variables as indicated below:

a) Very high presence

Achievement Motivation	(0.817)
------------------------	---------

b) Considerable presence

Home Learning Facility	(0.630)
------------------------	---------

c) Presence to some extent

Family Cultural Level	(0.453)
-----------------------	---------

None of the remaining ten variables have significant loading on this factor. This factor is characterised by the very high presence of the variables Achievement Motivation, considerable presence of the familial variable Home Learning Facility and slight presence of the familial variable Family Cultural Level. This factor is therefore labelled as 'Achievement Motivation of the Family'.

This factor is accounts for nearly 18% of the variance of the battery of the thirteen predictor variables.

Factor 5

This factor has significant loading in one psychological variable and one familial variable as noted below:

a) Considerable presence

Attitude towards Malayalam	(0.780)
----------------------------	---------

b) Considerable absence

Family Cultural Level	(-0.636)
-----------------------	----------

This factor is thus characterised by the high presence of the psychological variable Attitude towards Malayalam and considerable absence of the variable Family Cultural Level. The remaining Variables have no significant loading on this factor. Considering the extent of presence and absence of the two variables this factor is labelled as 'Scholastic Attitude to Malayalam'.

This factor accounts for nearly 14 per cent of the variance of the battery of the thirteen predictor variables.

4.4.3. Factor Structure of LCUA in Malayalam

Correlation matrix of the predictor variables which is the input data for extracting the factor structure of LCUA group is given as Table 30.

Four significant factors emerged in the analysis. The factor matrix of these four significant factors, before and after rotation along with communalities are given in Table 31.

The schematic representation of the 4 (four) significant factors are given in Figure 2.

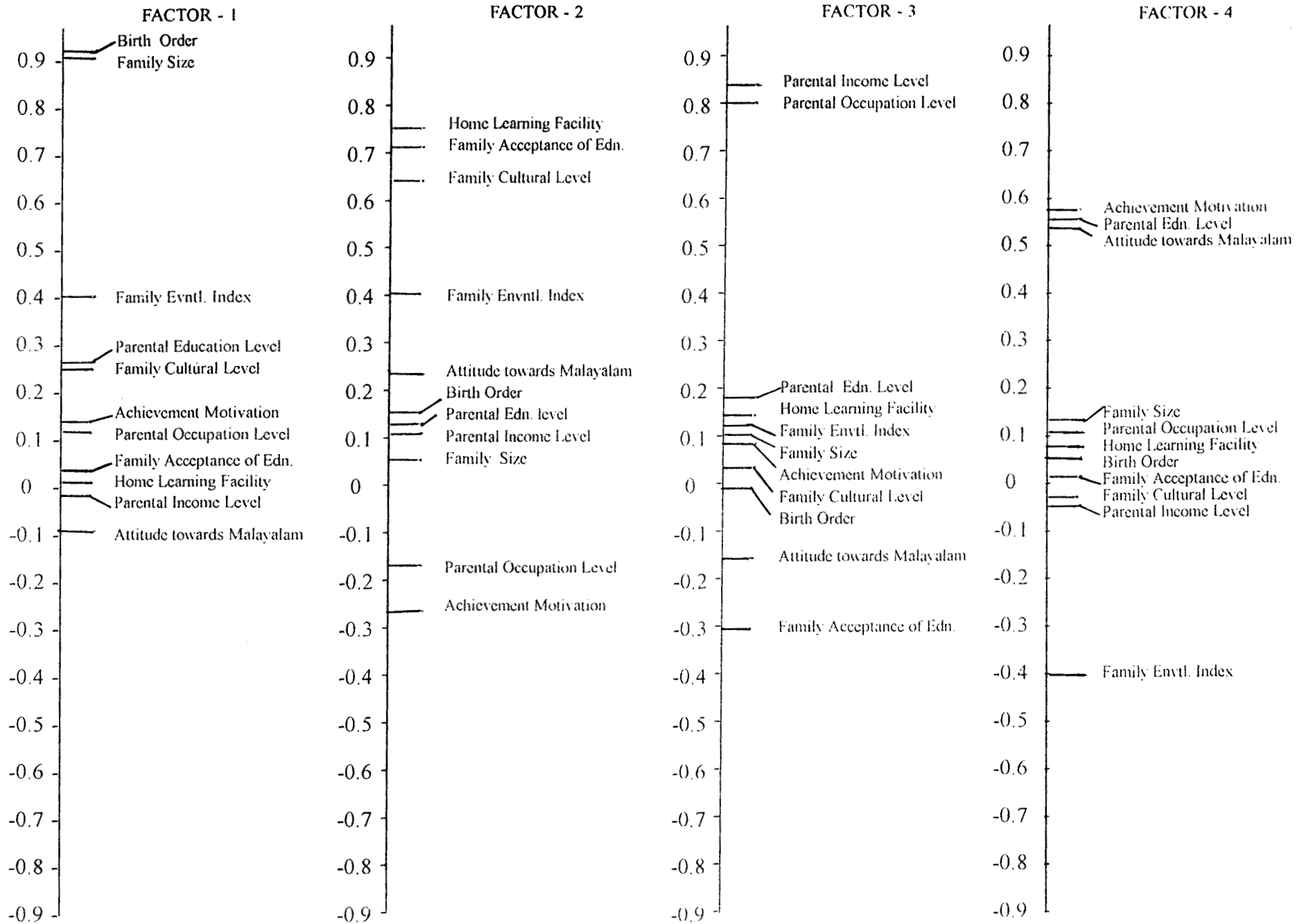
Table 30
Correlation Matrix of the Predictor Variables for LCUA

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Achievement Motivation	1.000												
2	Attitude towards Malayalam	.0777	1.000											
3	Home Learning Facility	-.0923	.0792	1.000										
4	Family Acceptance of Education	-.0668	.1113	.3541*	1.000									
5	Family Cultural Level	-.1653	.0768	.2927*	.3414**	1.000								
6	Family Environmental Index	-.846	-.0878	.2258	.2239	.3190*	1.000							
7	Social Familial Index	.1460	.0633	.6577**	.7244**	.6968***	.6588**	1.000						
8	Parental Education Level	.1804	-.008	.1284	-.0003	.1792	-.0872	.0691	1.000					
9	Parental Occupation Level	.1387	.0048	-.0757	-.3299*	.0215	.0235	-.1425	.1026	1.000				
10	Parental Income Level	.0270	-.1041	.1259	-.0734	-.0164	.1217	.0528	.0814	.4517**	1.000			
11	Socio Economic Status	.1534	-.0488	.0626	-.2237	.0651	.0436	-.0315	.4383*	.8254**	.7763**	1.000		
12	Family Size	.0885	.0506	.1442	.0201	.2236	.2433	.2250	.2694	.1777	.1102	.2488	1.000	
13	Birth Order	.0925	.0459	.1441	.1805	.2622	.2985*	.3245*	.2161	.0695	.0592	.1421	.8169**	1.000

Table 31
Unrotated and rotated Factor Matrix of the Predictor Variables of group LCUA

Sl. No.	Predictor Variables	Unrotated Factors					Rotated Factors				
		Factor 1	Factor 2	Factor 3	Factor 4	h ²	Factor 1	Factor 2	Factor 3	Factor 4	h ²
1	Achievement Motivation	.00835	.41177	.46560	.22182	.43562	1.44224	-.25635	.08233	.58816	.43562
2	Attitude towards Malayalam	.09456	-.11307	.40845	.47127	.41065	-.09001	.23925	-.15075	.56797	.41065
3	Home Learning Facility	.49844	-.32497	-.21188	.44615	.59800	.00726	.75756	.13137	.08241	.59800
4	Family Acceptance of Education	.41905	.63274	.02488	.21178	.62143	.03113	.71952	-.32048	.00613	.62143
5	Family Cultural Level	.61065	-.29925	-.13901	.15500	.56579	.26542	.65826	.02199	-.03950	.56579
6	Family Environmental Index	.54352	.16591	-.41141	-.28356	.567260	.40182	.40476	.11963	-.48270	.567260
7	Parental Education Level	.35663	.29454	.33193	.36143	.45475	.27017	.13142	.18291	.57523	.45475
8	Parental Occupation Level	.11157	.73068	-.34041	.21528	.70858	.11184	-.17151	.80883	.11159	.70858
9	Parental Income Level	.19389	.49911	.59116	.30709	.73048	-.00621	.12053	.84360	-.060526	.73048
12	Family Size	.760678	.34720	.24273	.30829	.85330	.90748	.06196	.10521	.121294	.85330
13	Birth Order	.79537	.20092	.26494	-.34700	.86358	.91473	.14507	-.01857	.07236	.86358
							2.0070	1.89475*	1.575001	1.2799685	
Percent Variance of the Factors							29.70%	28.042%	23.310%	18.943%	99.9956%

Fig. 2. Schematic Representation of the Factor Structure of LCUA Group



4.4.4. Discussion of the Factors of the group LCUA

Factor 1

This factor has significant loading on three variables as indicated below:

Extreme High Presence

(i) Birth Order	(0.914)
(ii) Family Size	(0.900)

Presence to some extent

Family Environmental Index	(0.401)
----------------------------	---------

The first two variables are highly present and the variable Family Environmental index is present to a some extent. These three variables defines the nature of this factor. From the variables present the factor could be labelled as 'Birth Status'.

This factor accounts for nearly 30% of the variance of the battery of the thirteen predictor variables.

Factor 2

This factor has significant loadings on four variables as indicated below.

Very high presence

- | | | |
|------|--------------------------------|----------|
| (i) | Home Learning Facility | (0.757) |
| (ii) | Family Acceptance of Education | (0.7195) |

Considerable presence

Family Cultural Level	(0.658)
-----------------------	---------

Presents to some extent

Family Environmental Index	(0.404)
----------------------------	---------

None of the remaining nine variables have significant loading on this factor.

This factor is thus characterised by the very high presence of the familial variables Home Learning Facility and Family Acceptance of Education; considerable presence of the variable Family Cultural level and by the slight presence of the variable Family Environmental Index. This factor is therefore labelled as 'Familial Approach to Education'.

This factor accounts for 28 per cent of the variance of the battery of the thirteen predictor variables used in the study.

Factor 3

This factor has significant loading on two variables as indicated below:

Very high presence

(i) Parental Income level	(0.843)
(iii) Parental Occupation level	(0.808)

Slightly absent

Family Acceptance of Education	(-0.320)
--------------------------------	----------

Among the variables having significant loading, Family Acceptance of Education is having negative loading. But the absence is very low. This factor is characterised by very high presence of variables, Parental Income Level and Parental Occupation Level. This factor has therefore been labelled as 'Parental IO status'.

This is a dominant factor, which accounts for 33% of the variance of the battery of the thirteen predictor variables.

Factor 4

This factor has significant loading on three variables which are as indicated below.

Considerable presence

(i) Achievement Motivation	(0.588)
(ii) Parental Education Level	(0.575)
(iii) Attitude towards Malayalam	(0.567)

Slight absence

Family Environmental Index (-0.482)

This factor has considerable presence of 3 variables viz., Achievement Motivation, Parental Education Level and Attitude towards Malayalam. The variable Family Environmental Index has a negative loading which suggests that this variable is slightly absent in the factor. The factor is thus labelled as 'Affection to Education'.

This is a factor which accounts for nearly 19% per cent of the variance of the battery of the predictor variables.

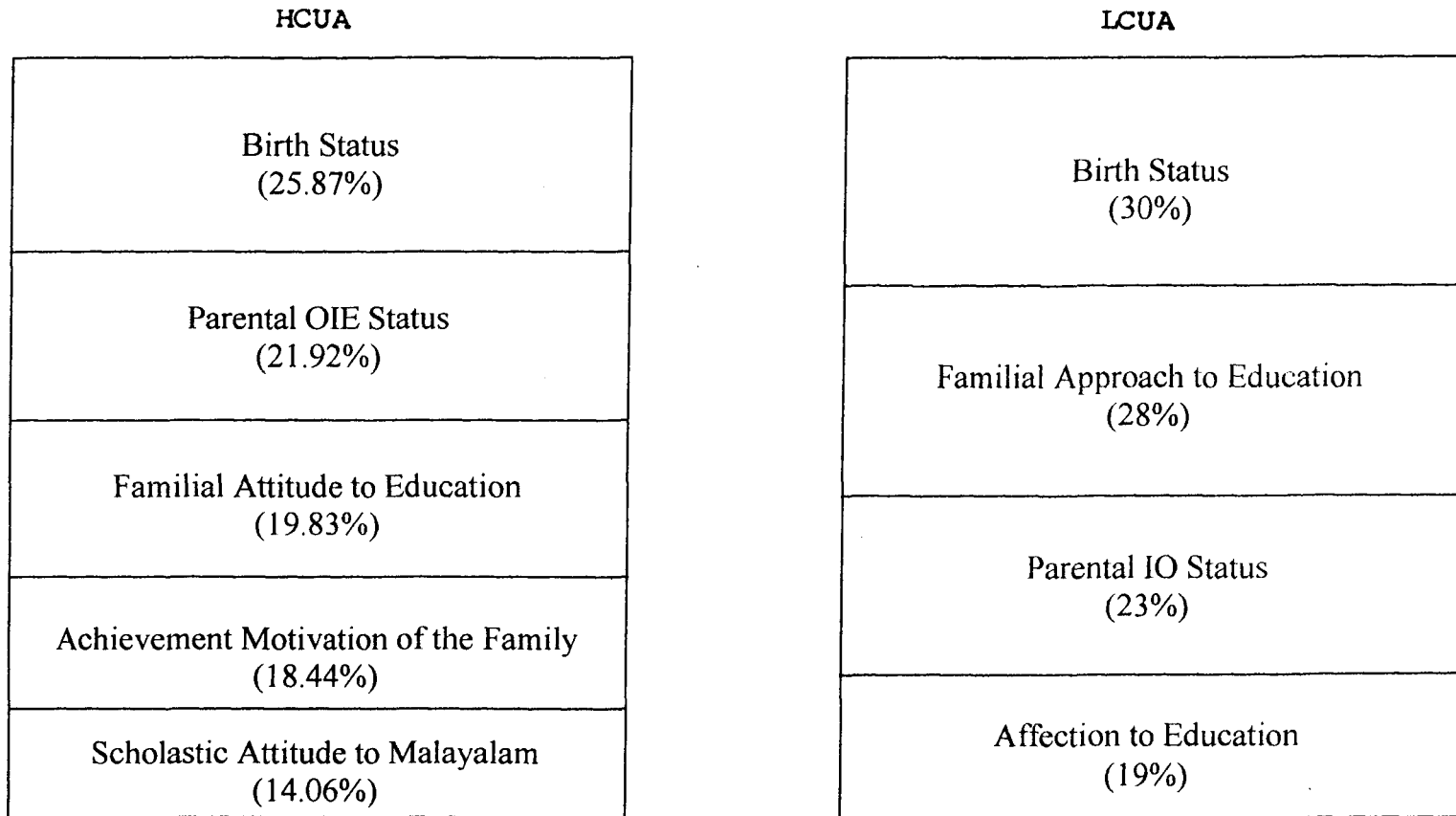
4.4.5. Comparison of the Factor Structures of Groups HCUA and LCUA in Malayalam

To enable comparison of the factor structures of the groups HCUA and LCUA the two factor structures with details like number of factors, the variables highly present or absent in the factor with respective factor loadings and the percentage of variance accounted for by each factor are presented in Table 32. The schematic representation of the above details is also presented as Fig. 3.

Table 32
Comparison of Factor Structure of Groups HCUA and LCUA

HCUA					LCUA				
Factors	Variables present/absent in the factor	Factor loadings	%of variance accounted	Proposed Name	Factors	Variables present/absent in the factor	Factor loadings	% of variance accounted	Proposed Name
1	Family Size	0.962	25.87	Birth Status	1	Birth Order	.0914	30	Both Status
	Birth Order	0.958				Family Size	0.90		
2	Parental Occupation Level	0.836	21.92	Parental Status	2	Home Learning Facility	0.757	28	Familial Approach to Education
	Parental Income Level	0.814				Family Acceptance of Education	0.719		
3	Parental Education Level	0.563	19.83	Family Attitude to Education	3	Family Environmental Index	0.404	23	Parental Position
	Family Acceptance of Education	0.779				Parental Income Level	0.843		
4	Family Environmental Index	0.576	18.44	Achievement Motivation of the Family	4	Family Acceptance of Education	-0.320	19	Affection to Education
	Family Cultural Level	0.416				Achievement Motivation	0.588		
5	Home Learning Facility	0.630	14.06	Scholastic Attitude to Malayalam		Attitude towards Malayalam	0.567		
	Family Cultural Level	0.453				Family Environmental Index	-0.482		
			100.10%					100%	

Fig. 3 Schematic Representation of the Factor Structures of Groups HCUA and LCUA in Malayalam



Details of the Factors given in Table 32 and in Figure 3 enabled the investigator to note the following similarities and dissimilarities of the factor structures of groups HCUA and LCUA in Malayalam.

1. The number of significant factors of the group HCUA is 5 and that of group LCUA is 4.
2. The first factor of HCUA is highly comparable with the first factor of LCUA as the two factors are characterized by the extremely high presence of the two familial variables, viz., Family size and Birth order.

The slight difference noticeable between the factors is that the factor of LCUA contains are more variable viz., Family Environmental index. Another slight difference noticeable is in the order of two variables in the two factors and in the percentage of variance accounted for by each (26% in the case of HCUA and 30% in the case of LCUA).

3. The second factor of HCUA is comparable with the third factor of LCUA. The variables present in the case of HCUA are Parental Occupation Level, Parental Income Level and Parental Education Level. Of these the variables present in the third factor of LCUA are Parental Income level and Parental Occupation level.

The difference in the two factors is that while Parental Education level is present to HCUA, it is not there in LCUA . Instead Family Acceptance of Education is absent to LCUA.

The percentage of variance accounted for by the two factors is slightly different (21% in the case of HCUA and 23% in the case of LCUA).

4. The third factor of HCUA and the second factor of LCUA are comparable.

The differences in the two factors are (i) in the absence of Parental Education level in HCUA (which is present in LCUA) (ii) The extent of factor loadings of the variables present (iii) The percentage of variance accounted for by the factors (20% to HCUA and 28% to LCUA).

5. The fourth factor of HCUA is comparable with the fourth factor of LCUA and in these two factors the variable Achievement Motivation is common. To HCUA along with Achievement Motivation, the other variables present are Home Learning Facility and Family Cultural Level. To LCUA the other variables present are parental Education level and Attitude towards Malayalam with absence of Family Environmental Index.

6. No comparable factor is there to LCUA for the fifth factor of HCUA.

Thus on the whole, there are more differences than similarities in the factor structures of HCUA and LCUA which suggests that the factor structure in terms of the select predictor variables of HCUA and LCUA are highly different.

This difference in the factor structures of HCUA and LCUA may be due to the differing level of creativity (high and Low) present among Underachievers in Malayalam. That is level of creativity is significant even among Underachievers in Malayalam.

4.4.6. Discriminant Function Analysis (DISCRIM)

The Discriminant Function Analysis (DISCRIM) of the eleven predictor variables on the two groups HCUA and LCUA by the Direct Method (SPSS Programme) revealed the following.

Eleven out of the thirteen predictor variables passed the tolerance test and hence these was entered in the analysis.

Maximum number of Discriminant function found between the groups and the predictor variables is only one with minimum cumulative percent of variance of 100.0. The sign value which shows the proportion of variance contributed by the single discriminant function is only 0.1364. The canonical correlation which is the multiple correlation between the

predictor variables and the discriminant function is 0.34655. The Wilk's Lambda is 0.8800.

The obtained χ^2 value for 11 df which gives an indication of the overall relationship between the two groups and the eleven predictor variables is 14.769.

The critical χ^2 value for 11df and at $\alpha = .05$ is 19.675.

This shows the obtained $\chi^2 < \chi^2_{.05}$ for 11 df. This suggests that there is no significant relation between the eleven predictor variables and the two groups. That is the two groups HCUA and LCUA cannot be discriminated significantly on the basis of the combination of the eleven predictor variables.

However, the standardised canonical discriminant function coefficients obtained are represented below which can be used for deriving discriminant function scores from standardised predictor scores (Table 33).

Table 33

Standardised Canonical Discriminant Function Coefficient

Predictor Variables	Function coefficients
Achievement Motivation	0.23608
Attitude towards Malayalam	-0.27225
Home Learning Facility	-0.21542
Family Acceptance of Education	0.27673
Family Cultural Level	-0.38819
Family Environmental Index	-0.37272
Parental Education Level	-0.27688
Parental Occupation Level	0.53348
Parental Income Level	0.32027
Family Size	0.02614
Birth Order	0.32274

The Pooled Within Groups Correlations between (Predictor) discriminating variables and canonical discriminant function (Ordered by size of correlations) are as follows: (Table 34).

Table 34

Pooled Within Groups Correlations

Predictor Variables	Function coefficients
Parental Occupation Level	0.59644
Parental Income Level	0.54047
Birth Order	0.33792
Achievement Motivation	0.30305
Family Cultural Level	0.30305
Family Size	0.27960
Family Environmental Index	-0.21936
Home Learning Facility	0.19041
Attitude towards Malayalam	-0.14891
Parental Education Level	-0.08998
Family Acceptance of Education	0.07271

The loadings obtained on the eleven predictor variables (shown in Table 34) with the single discriminant function suggests that four predictors Parental Occupation Level, Parental Income Level , Birth Order and Achievement Motivation load highly with the function (by

convention, correlations in excess of .0.30 are considered high) but the remaining seven variables do not have high relation. In these seven variables, four have even negative relation with the function. All these suggests that the function is determined to a great extent by the four predictor variables viz., Parental Occupation Level, Parental Income Level , Birth Order and Achievement Motivation

Further, canonical discriminant functions evaluated at group means (Group Centroids) are,

Group 1. -0.33490

Group 2. 0.40068

An inspection of the above two group centroids suggests that there is not much difference between the centroids of the two groups, if we plot these two on the discriminant function axis. This also suggests that the two groups HCUA and LCUA cannot be discriminated significantly on a combination of the eleven predictor variables

4.5. SUMMARY OF FINDINGS

Identification of predictor variables differentiating between groups HCUA and LCUA have been studied by using the major statistical techniques, viz..

1. Two-tailed test of significance of difference between mean scores.
2. Pearson's product moment coefficient of correlation, 'r'
- 3 Identification and comparison of factor structures derived by Principal Component Factor Analysis followed by Varimax rotation.
4. Discriminant function analysis (Direct Method)

The results obtained after statistical analysis are summarised below:

4.5.1. The variables for which significant difference in the mean scores was found between groups HCUA and LCUA in Malayalam are.,

- i. Socio Economic Status (CR = 3.18)
- ii. Parental Occupation level (CR = 2.42)
- iii. Parental Income Level (CR = 2.20)

For the following Predictor variables no significant mean difference was found between groups HCUA and LCUA in Malayalam.

- (i) Achievement Motivation (CR -1.23)
- (ii) Attitude towards Malayalam (CR 0.60)
- (iii) Home Learning Facility (CR -0.77)
- (iv) Family Acceptance of Education (CR -0.30)
- (v) Family Cultural Level (CR 1.18)
- (vi) Family Environmental Index (CR -0.89)
- (vii) Social Familial Index (CR 0.22)

(viii) Parental Education Level	(CR 0.37)
(ix) Family Size	(CR 1.37)
(x) Birth Order	(CR 1.14)

4.5.2. When extent of relation between the criterion variables Creativity and Achievement in Malayalam with the thirteen predictor variables were estimated using Pearson's 'r' and tested for significance by Fisher's 't' it was found that

- i) Only one variable (Socio Economic Status, has significant and positive relation with Creativity ($r = 0.357$); $t = 2.8$

$CI_{0.99}$ of r (.0526, 0.66045);

$$r^2 = 12.70$$

- ii) Only one variable (Attitude towards Malayalam) has significant and positive relation with Achievement in Malayalam ($r = 0.276$); $t = 2.107$.

$CI_{0.99}$ of r (-0.451, 0.6008)

$$r^2 = 7.612$$

4.5.3. The derived factor structure of groups HCUA and LCUA in Malayalam are as follows: (Table 35).

Table 35

Factor Structure of Groups HCUA and LCUA in Malayalam

Factor Structure of the Group HCUA in Malayalam

HCUA				
Factors	Variables present/absent in the factor	Factor loadings	%of variance accounted	Proposed factor name
1	Family Size Birth Order	0.962 0.958	25.87	Birth Status
2	Parental Occupation Level Parental Income Leel Parental Education Level	0.836 0.814 0.563	21.92	Parental OIE Status
3	Family Acceptance of Education Family Environmental Index Family Cultural Level Home Learning Facility Parental Educational Level	0.779 0.576 0.416 0.357 -0.300	19.83	Family Attitude to Education
4	Achievement Motivation Home Learning Facility Family Cultural Level	0.817 0.630 0.453	18.44	Achievement Motivation of he Family
5	Attitude towards Malayalam Family Cultural Level	0.780 -0.614	14.04	Scholastic Attitude to Malayalam

Factor Structure of the Group LCUA in Malayalam

LCUA				
Factors	Variables present/absent in the factor	Factor loadings	%of variance accounted	Proposed factor Name
1	Birth Order Family Size Family Environmental Index	.0914 0.90 0.401	30	Birth Status
2	Home Learning Facility Family Acceptance of Education Family Cultural Level Family Environmental Index	0.757 0.719 0.658 0.404	28	Familial Approach to Education
3	Parental Income Level Parental Occupation Level Family Acceptance of Education	0.843 0.808 -0.320	23	Parental Position
4	Achievement Motivation Parental Education Level Attitude towards Malayalam Family Environmental Index	0.588 0.575 0.567 -0.482	19	Affection to Education
5				

4.5.4. Comparison of the factor structures of groups HCUA and LCUA reveals that there are more differences in the factor structures than similarities.

- i) The number of significant factors of HCUA is 5 and that of LCUA is 4.
- ii) The first factor of HCUA is comparable with the first factor of LCUA. The extreme high presence of the two familial variables viz. Family size, and Birth Order is the major characteristics of these two factors.

But the following are the differences in these two factors.

- (a) The order of the two variables in the two factors are different
 - (b) The factor of LCUA has high loading one more variable viz. family Environmental index.
- (iii) The second factor of the HCUA is comparable with the third factor of LCUA.

The factor of HCUA has high loadings on three variables viz., Parental Occupation Level, Parental Income Level, and Parental Education Level. The factor of LCUA has high loadings on two variables only viz., Parental Income Level and Parental Occupation Level.

The difference seen between the two factors is that Parental Education Level is present in the factor of HCUA, but not in the factor of LCUA significantly. Besides Family Acceptance of Education is absent in the factor of LCUA.

There is slight difference in percentage of variance accounted for by the two factors.

(iv) The third factor of HCUA and the second factors of LCUA are comparable.

The difference in the two factors are:

- (a) Absence of Parental Education Level in HCUA (which is present in LCUA)
 - (b) The extent of factor loadings of the variables present
 - (c) The percentage of variance accounted for by the factors.
- (v) The fourth factor of HCUA is comparable with the fourth factor of LCUA and in these factors the variable Achievement Motivation is common.

But to HCUA along with Achievement Motivation, the other variables present are Home Learning Facility and Family Cultural Level. To LCUA the other variables present are Parental Education Level and

Attitude towards Malayalam with absence of Family Environmental Index.

(vi) No comparable factor is there for the fifth factor of HCUA

Thus comparison of the factor structures of groups HCUA and LCUA reveals that there are more differences in the factor structures of HCUA and LCUA than similarities.

4.5.5. The Discriminant Function Analysis by the Direct Method resulted in the Discrimination Coefficient for one discrimination function in terms of eleven predictor variables which passed the tolerance test. But the function is not significant enough (by the χ^2 value) to discriminate between groups HCUA and LCUA in Malayalam.

4.6. TENABILITY OF HYPOTHESES

The statistical analysis done warrants comments on the tenability of the hypotheses set for the study.

The first hypothesis is that "The mean scores of the select predictor variables will be significantly different between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam." This hypothesis is slightly substantiated in view of the

Attitude towards Malayalam with absence of Family Environmental Index.

(vi) No comparable factor is there for the fifth factor of HCUA

Thus comparison of the factor structures of groups HCUA and LCUA reveals that there are more differences in the factor structures of HCUA and LCUA than similarities.

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4.6. TENABILITY OF HYPOTHESES

The statistical analysis done warrants comments on the tenability of the hypotheses set for the study.

The first hypothesis is that "The mean scores of the select predictor variables will be significantly different between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam." This hypothesis is slightly substantiated in view of the

findings that only three out of thirteen select predictor variables exhibited significant difference between groups HCUA and LCUA in Malayalam..

The second hypothesis is "The select predictor variables will have significant relationship with the criterion variables viz.,

- i) Creativity
- ii) Achievement in Malayalam.

This hypothesis also is very slightly substantiated since only one variable Socio Economic Status is found to have significant relationship with Creativity and that only one variable Attitude towards Malayalam have significant relationship with Achievement in Malayalam.

The third hypothesis states that "The factor structures of HCUA and LCUA will be different in terms of

- i) number of factors
- ii) presence or absence of the in put predictor variables in the factors
- iii) percentage of variance accounted for by the factors.

In view of the results, this hypothesis is found to be fully substantiated.

The fourth hypothesis is "Different combination of variables exist by which groups HCUA and LCUA differ."

This hypothesis is not at all substantiated as it was found by the Discriminant Function Analysis that the Discriminant coefficients of the single function are not significant enough to discriminate between groups HCUA and LCUA in Malayalam.

SUMMARY, CONCLUSIONS AND SUGGESTIONS

E. S. Ramesan “Achievement motivation, attitude towards malayalam and some social-familial varlables differentiating between high-, and low-creative underachievers in Malayalam among secondary school pupils of Kerala”
Thesis. Department of Education , University of Calicut, 2000

SUMMARY, CONCLUSIONS
AND SUGGESTIONS

Methodology in Retrospect
Major Findings
Conclusions
Educational Implications of the Study
Suggestions for Further Research

5

SUMMARY, CONCLUSIONS AND SUGGESTIONS

The present study was to test and to know whether a given set of predictor variables are capable of discriminating between High-, and Low-Creative Underachievers in Malayalam. Major findings derived by the study, conclusions drawn, educational implications of the findings and suggestions for further researches in the area are reported in the chapter along with a brief review of the methodology used for the study.

5.1. METHODOLOGY IN RETROSPECT

5.1.1. Title

ACHIEVEMENT MOTIVATION, ATTITUDE TOWARDS MALAYALAM AND SOME SOCIAL-FAMILIAL VARIABLES DIFFERENTIATING BETWEEN HIGH-, AND LOW-CREATIVE UNDERACHIEVERS IN MALAYALAM AMONG SECONDRY SCHOOL PUPILS OF KERALA.

5.1.2. Variables

The nature of the study warranted the use of two types of variables viz.,

1. Criterion variables
2. Predictor variables.

5.1.3. Criterion Variables

As the investigator was interested in identifying the discriminating variables between High-, and Low-Creative Underachievers in Malayalam, the study was designed with the following criterion variables to locate and classify the two groups HCUA and LCUA in Malayalam. The criterion variables used were,

- i) Intelligence (Verbal and Non-Verbal)
- ii) Achievement in Malayalam
- iii) Creativity

5.1.4. Predictor Variables

- i. Achievement Motivation
- ii. Attitude towards Malayalam
- iii. Home Learning Facility
- iv. Family Acceptance of Education
- v. Family Cultural Level
- vi. Family Environmental Index
- vii. Socio Familial Index
- viii. Parental Education Level
- ix. Parental Occupation Level
- x. Parental Income Level
- xi. Socio Economic Status
- xii. Family Size
- xiii. Birth Order

5.1.5. Hypotheses

The study was designed with the major hypotheses that each select predictor variable will discriminate significantly between High Creative and Low Creative Underachievers in Malayalam.

The investigator has also set the following sub hypothesis, the testing of each of which evidences the above major hypothesis. The sub-hypotheses stated were:

- (i) The mean scores of the select predictor variables will be significantly different between High Creative Underachievers (HCUA) and Low Creative Underachievers (LCUA) in Malayalam.
- (ii) The predictor variables will have significant relationship with
 - 1. Creativity
 - 2. Achievement in Malayalam
- (iii) The factor structures of HCUA and LCUA will be different in terms of
 - (i) Number of factors
 - (ii) Presence or absence of the input predictor variables in the factors
 - (iii) Percentage of variance accounted for by the factors.

- (iv) Different combination of variables exists by which groups HCUA and LCUA differ.

5.1.6. Objectives

The present study was done with the following objectives.

- (i) To compare the mean scores of the select predictor variables between HCUA and LCUA in Malayalam.
- (ii) To estimate the nature and extent of relationship of Creativity and Achievement in Malayalam with Achievement Motivation, Attitude towards Malayalam and the Select Social Familial Variables.
- (iii) To derive and compare the factor structure of High and Low Creative Underachievers in Malayalam.
- (iv) To know the combination of predictor variables which help to discriminate between groups HCUA and LCUA in Malayalam.

5.1.7. Sample

The study was conducted on a sample of 715 secondary school pupils of Kerala state, selected by stratified sampling technique giving due representation to the factors like gender, school locale, type of school management and efficiency level of schools.

5.1.8. Tools

The tools used were

- (i) Kerala University Group Test of Intelligence (Verbal)
- (ii) Calicut University Letter Matrices Test of Intelligence
- (iii) Generalised Achievement test in Malayalam for Secondary School Pupils of Kerala
- (iv) Verbal part of the Comprehensive Test of Creativity for Secondary School Pupils
- (v) Kerala Scale of Achievement Motivation
- (vi) Scale of Attitude towards Malayalam
- (vii) Social Familial Inventory
- (viii) Kerala Socio Economic Scale (Modified).

5.1.9. Statistical Techniques Used

The statistical techniques used were,

- (i) Two-tailed test of significance of difference in the mean scores of large independent samples.
- (ii) Pearson's product moment coefficient of correlation.
- (iii) The 't' test of significance of correlation
- (iv) Principal component factor analysis followed by Varimax Rotation
- (v) Discriminant function analysis (Direct Method)

5.2. MAJOR FINDINGS OF THE STUDY

1. The Critical Ratio of the mean difference obtained between High Creative Underachievers and Low Creative Underachievers in Malayalam revealed that significant difference in mean scores exist only in the case of three out of thirteen variables and hence the two groups are significantly different in the case of three variables only. These three variables in the order of importance are,

- | | | |
|-------|---------------------------|--------------|
| (i) | Socio Economic Status | (CR = -3.18) |
| (ii) | Parental Occupation Level | (CR = 2.42) |
| (iii) | Parental Income Level | (CR = 2.20) |

II. When the extent of relation between the criterion variables Creativity and Achievement in Malayalam with the thirteen predictor variables were estimated by Pearson's 'r' and tested for significance by Fisher's 't', it was found that

- (i) Only one variable (Socio economic status $r = .357$) has significant and positive relation with creativity

$Cl_{0.99}$ of 'r' (.0526, 0.66045); $r^2 = 12.70$

- (ii) Only one variable (Attitude towards Malayalam, $r = .2754$) has significant and positive relation with Achievement in Malayalam.

$Cl_{0.99}$ of r (-0.451, 0.6008); $r^2 = 7.612$.

III. The factor structure of HCUA and LCUA were identified by principal Components Factor Analysis Method and the obtained factor matrices were rotated by Varimax Rotation. Details of two factor structures are as given below (Tables 36 and 37).

Table 36

Factor Structure of the group HCUA in Malayalam

Factor No.	Variables present/absent in the Factor significantly	Factor loadings	Proposed Factor Name
1	Family size Birth Order	0.962 0.958	Birth Status
2	Parental Occupation Level Parental Income Level Parental Education Level	0.836 0.814 0.563	Parental OIE status
3	Family Acceptance of Education Family Environmental Index Family Cultural Level Home Learning Facility`	0.779 0.576 0.416 0.352	Familial Attitude to Education
4	Achievement Motivation Home Learning Facility Family Cultural Level	0.817 0.630 0.453	Achievement Motivation of the Family
5	Attitude towards Malayalam Family Cultural Level	0.780 -0.614	Scholastic Attitude to Malayalam

Table 37

Factor Structure of the group LCUA in Malayalam

Factor No.	Variables present/absent in the Factor significantly	Factor loadings	Proposed Factor Name
1	Birth Order Family size Family Environmental Index	0.914 0.900 0.401	Birth Status
2	Home Learning Facility Family Acceptance of Education Family Cultural Level Family Environmental Index	0.757 0.719 0.658 0.404	Familial Approach to Education
3	Parental Income Level Parental Occupation Level Family Acceptance of Education	0.843 0.808 -0.320	Parental IO Status
4	Achievement Motivation Parental Education Level Attitude towards Malayalam Family Environmental Index	0.588 0.575 0.567 -0.482	Affection to Education

IV. Comparison of the factor Structure of groups HCUA and LCUA yielded the following similarities and differences

- i) The number of significant factors of HCUA is 5 and that of LCUA is 4.

- ii) The first factor of HCUA is comparable with the first factor of LCUA. The extreme high presence of the two familial variables viz. Family Size and Birth Order is the major characteristics of these two factors.

But the following are the differences in these two factors :

- a) The order of the two variables in the two factors are different
 - b) The factor of LCUA has high loading on one more variable viz. Family Environmental Index.
- iii) The second factor of HCUA is comparable with the third factor of LCUA.

The factor of HCUA has high loadings on three variables viz. Parental Occupation Level, Parental Income Level and Parental Education Level. The factor of LCUA has high loadings on two variables only, viz., Parental Income Level and Parental Occupation Level.

The difference seen between the two factors is that Parental Education Level is present in the factor of HCUA, but not in the factor of LCUA. Family Acceptance of Education is absent in the factor of LCUA.

There is slight difference in the percentage of variance accounted for by the two factors.

- (iv) The third factor of HCUA and the second factor of LCUA are comparable.

The difference in the two factors are:

- i) absence of Parental Education Level in HCUA (which is present in LCUA)
 - ii) the extent of factor loadings of the variables present
 - iii) the percentage of variance accounted for by the factors.
- (v) The fourth factor of HCUA is comparable with the fourth factor of LCUA and in these factors the variable Achievement Motivation is common.

But to HCUA along with Achievement Motivation, the other variables present are Home Learning Facility and Family Cultural Level. To LCUA the other variables present are Parental Education Level and Attitude towards Malayalam with absence of Family Environment Index.

- (vi) No comparable factor is there for the fifth factor of HCUA

Thus comparison of the factor structures of groups HCUA and LCUA reveals that there are more differences in the factor structures than similarities.

V. Discriminant Function Analysis

The discriminant function analysis by the Direct Method resulted in the Discrimination Coefficients for one discriminant function in terms of eleven predictor variables which passed the tolerance test. But the function is not significant enough (by the χ^2 value) to discriminate between groups HCUA and LCUA in Malayalam.

5.3. CONCLUSION

Even though by two-tailed 't' test it was seen that only three variables are differentiating between HCUA and LCUA and by Pearson's 'r' it was found that one variable each is related with creativity (socio economic status) and with Achievement in Malayalam (Attitude towards Malayalam), by factor analysis it was found that the factor structures of HCUA and LCUA (in terms of the select predictor variables) are considerably different. But the Discriminant function analysis done revealed that the combination of the eleven predictor variables (the single discriminant function possible) could not discriminate significantly between the groups HCUA and LCUA in Malayalam.

5.4. EDUCATIONAL IMPLICATIONS OF THE STUDY

The preliminary analysis of the study revealed that out of 715 secondary school pupils studied (belonging to four districts of Kerala), 123

(17.2%) are underachievers, 471 (65.9%) are normal achievers, and 121 (16.9%) are overachievers in Malayalam.

This information from preliminary analysis gives an indication of the extent of the high rate of underachievement in Malayalam among school children. The investigator feels that this information is significant to comment.

1. As far as our society and school teachers are concerned 'underachievement' and 'low achievement' means the same. They consider that this phenomenon is occurring mainly due to the low intelligence of students and the feeling is that these students can never be made better achievers. Hence they often neglect these students in the major learning activities. Similar is the attitude of parents. This negative attitude of teachers and parents towards their students again may cause poor learning which may again and again strengthen the underachievement of students. Therefore the investigator feels that an awareness may be created on the part of the parents and teachers that underachievement is not anonymous with low achievement and that underachievement can be rectified if proper remedial measures are taken.

2. Kerala being the first total literacy achieved state, the people of Kerala are highly sensitive to the educational problems of their children. Hence this information has profound value for the society also. Timely

interventions of the society on the academic matters can turn the situation in a positive direction.

The critical ratios of the mean difference obtained between HCUA and LCUA revealed that significant difference in mean scores exist in three variables only. Viz., Socio Economic Status, Parental Occupation Level, and Parental Income Level. This suggest that these three variables may have some relation with creativity of underachieving pupils. The Pearson's 'r' and Fisher's 't' test substantiated that among the predictor variables - Socio Economic Status - has significant and positive relationship with the creativity score of underachievers. Analysis further revealed that the predictor variable, Attitude towards Malayalam, has positive and significant relation with the criterion variable Achievement in Malayalam.

Further, by the factor analysis, it was found that Parental Status is a significant factor (having high loadings on variables like Parental Education Level, Parental Occupation Level and Parental Income Level) to both HCUA and LCUA groups. That is the significance of the Socio-Economic Factor behind underachievement cannot be denied.

The above findings derived from the analysis throws more light towards the significance of the implication of the study.

The investigator feels that this finding has a very significant implications in the field of education and in the development of the country.

3. Review of the studies given in this report suggests that the Socio Economic Status of the pupils (comprising of Parental Education, Occupation and Income level) is a key factor behind not only high academic achievement but of achievement in any ability. This implies that often pupils of the poor Socio-Economic background suffers. This fact is highly reflected in this study also.

4. The increased SES of any nation is linked with the high/better performance of the future generation and with the development of the nation. That is underachievement among pupils can be reduced to a greater extent if the nation concentrates on the social well being of its people which helps to give the future generation all the physical and psychological requirements for efficient and fruitful learning.

5. The system of Education brought by the Navodaya Vidyalayas of the Central Government is a desirable approach in this regard. Through Navodaya Vidyalayas, the Government of India is providing all type of educational facilities to the students irrespective of their Socio Economic backgrounds and it is seen that this system is quiet beneficial especially to the lower strata of the society. The investigator is of the opinion that the

state Governments also can think in this line and start schools of this kind especially for talented pupils of the lower Socio Economic strata. In Kerala it is seen that the emergence of Panchayat Raj and the implementation of people planning programmes are provide a very conducive environment for the upliftment of people of lower economic strata. Most of the members of the peoples planning' programmes are teachers. Hence through this programme teachers can provide several educational compensation programmes for the weaker sections of pupils viz., slow learners and underachievers.

6. The assumption of society and teachers that underachievement and low achievement are the same (only very few teachers discriminate between the two) is a very serious one, detrimental to the desired development of the future generation. Therefore, teachers and parents should be given a warm awareness on the meaning or implications of these two terms—low and under achievement-- in the educational set up. The society must understand that underachievers are pupils who do not achieve up to the expected level of ability. Parents must find causes behind this low level of achievement in spite of their better ability to perform better. Parents should be given opportunities to know the ability level of their wards and their expected level of achievement. For this, there should be provision for testing of the mental ability of all the pupils at least at each phase of the educational system viz., primary upper primary

and secondary which can efficiently be done if there is a guidance and counselling bureau in every school.

7. Teachers organisation also can do something in this regard. They can give scholarships to the students of specially talented and this will act as compensational help to the deserving low socio economic children.

8. Along with the above possible measures the investigator feels that the attitude of teachers towards pupils of low socio economic background should be very positive. Teachers should accept the pupils in their every approach, and should be a guide and councillor of the needy students. This in turn will be a positive reinforcement to the students.

9. If the teachers are able to identify underachiever this should be informed to the parents so as to ensure their cooperation for the betterment of their children.

A close observation of the academic achievement status of the student throughout the school years or at least at higher secondary level based on their intelligence status is highly essential. It will be of great help to the community as a measure to avoid educational wastage by way of underachievement. A planned joint venture of authorities and teachers is highly desirable in this regard.

10. Another significant finding of the study is the positive relationship between Attitude towards Malayalam and Achievement in Malayalam. This findings has a great deal of direct implications in the day today activities of the classroom. Right attitude towards an academic subject and desirable level of achievement in that subject is quiet natural. But understanding of this concept in its high depth by the teacher community will of course be a good movement towards better or high achievement in school subjects as attitude of the students towards academic subjects depends on various factors like interest shown by the teachers, variety of teaching techniques, profound competency of the teacher, attitude of the teacher towards the students etc. All these can be improved to a greater extent by proper orientation to the young teachers as pre-service or in-service. Authorities also can act a significant role in this regard.

The factor structure of HCUA and LCUA (in terms of select predictor variables) are considerably different. The investigator feels that this findings also has some implications in the field of education.

The different factor structures of the two groups HCUA and LCUA suggests that different treatment are to be given to these two groups of underachievers. Creativity may be the major variable causing such a difference among underachievers and hence the creativity level of pupils

is to be considered before taking measures for rectifying underachievement.

Thus as far as educationists and teachers are concerned, the major task is increasing the quality of education by reducing the rate of underachievement and increasing the creative capacities of the student community at any cost.

5.5. SUGGESTIONS FOR FURTHER RESEARCH

On the basis of the findings of the present study, the investigator offers certain areas for having further study in the area. While such suggestions cannot be regarded as very exhaustive and complete, an attempt has been made to list some areas of interest to the investigator .

1. A longitudinal study of the causal factors of poor learning among Creative Underachievers in Malayalam from primary level to secondary level.
 2. Replication of the study on High and Low Creative Underachievers in Malayalam with samples from Higher Education Sector.
 3. A study on the Psychological and Socilal-Familial Factor Structure of High and Low Creative Underachievers in Malayalam with more psychological and social-familial variables used other than in the study.
-

4. A study on the relative efficiency of select Psychological and Social Familial Variables in predicting Overachievement among Secondary School Pupils.
5. A study with discriminant function analysis to derive discriminant functions which may help to discriminate between High Creative and Low Creative Underachievers in Malayalam using a wide range of psychological and social-familial variables among secondary school pupils of Kerala.

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TOOLS

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APPENDICES

KERALA UNIVERSITY

GROUP TEST OF INTELLIGENCE

(VERBAL)

വിദ്യാർത്ഥികളുടെ മാനസികമായ കഴിവുകളെ പരിശോധിക്കുന്നതിനുവേണ്ടി തയ്യാറാക്കിയിട്ടുള്ളതാണ് ഈ ടെസ്റ്റ്. വിവിധ തരത്തിലുള്ള 5 ടെസ്റ്റുകൾ ഇതിൽ ഉൾക്കൊള്ളിച്ചിരിക്കുന്നു. ഓരോ ടെസ്റ്റിന്റെയും മുമ്പിൽ കൊടുത്തിട്ടുള്ള നിർദ്ദേശങ്ങൾ എഴുതിത്തുടങ്ങുന്നതിനുമുമ്പ് ശ്രദ്ധിച്ചുവായിക്കേണ്ടതാണ്. ഉത്തരം എഴുതേണ്ട രീതി ഉദാഹരണങ്ങൾ കൊണ്ട് വ്യക്തമാക്കിയിട്ടുണ്ട്. നിർദ്ദിഷ്ടസമയത്തിനുള്ളിൽ ഉത്തരം എഴുതിത്തീർക്കുവാൻ ശ്രമിക്കണം. യാതൊരു കാരണവശാലും കൂടുതൽ സമയം അനുവദിക്കുന്നതല്ല. പറഞ്ഞതിനുശേഷം മാത്രം എഴുതിത്തുടങ്ങുകയും ഏറ്റവും വേഗത്തിൽ എഴുതിത്തീർക്കാൻ ശ്രമിക്കുകയും ചെയ്യേണ്ടതാണ്. തന്നിരിക്കുന്ന ഈ ചോദ്യക്കടലാസിൽ എന്തെങ്കിലും എഴുതുകയോ അടയാളപ്പെടുത്തുകയോ ചെയ്യരുത്. പ്രത്യേകം തന്നിട്ടുള്ള ഉത്തരക്കടലാസിൽ മാത്രമേ ഉത്തരം എഴുതാവൂ. ഉത്തരങ്ങൾ കഴിയുന്നത്ര ശരിയായും വൃത്തിയായും എഴുതേണ്ടതാണ്.

TEST I

ഈ വിഭാഗത്തിൽ കൊടുത്തിട്ടുള്ള ചോദ്യങ്ങളിൽ മൂന്നു വാക്യകൾ വീതം തന്നിട്ടുണ്ട്. നാലാമത്തെ വാക്ക് എഴുതാതെയും വിട്ടിരിക്കുന്നു. ഒന്നാമത്തെ വാക്കിന് രണ്ടാമത്തെ വാക്കിനോടുള്ള ബന്ധംപോലെ മൂന്നാമത്തെ വാക്കിനോട് യോജിക്കുന്ന വാക്ക് ബ്രാക്കറ്റിൽനിന്ന് തിരഞ്ഞെടുത്ത് താഴെ കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം.

- 1. പശു: പുല്ലു: സിംഹം:
 - (a. ആഹാരം, b. മാംസം, c. വിശപ്പ്, d. തീറ്റ)

പശുവിന്റെ ആഹാരസാധനമാണ് പുല്ലു. അതുപോലെ സിംഹത്തിന്റെ ആഹാരം മാംസമാണ്. അതുപോലെ b ആണ് ശരിയായ ഉത്തരം.

a	b	c	d	a, b, c, d ഇവയുടെ താഴെ
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	ഓരോ വൃത്തം കാണുന്നുണ്ടല്ലോ.

അതിൽ ശരിയായ ഉത്തരത്തിന്റെ അക്ഷരത്തിന് താഴെയുള്ള വൃത്തത്തിൽ 'X' ചിഹ്നമിട്ട് അടയാളപ്പെടുത്തുക. ഇവിടെ b യുടെ താഴെയുള്ള വൃത്തത്തിൽ അടയാളപ്പെടുത്തിയിരിക്കുന്നു. ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക. കഴിയുന്നതും തൊറുവരുത്താതെ എഴുതിൻ ശ്രമിക്കുക. വൃത്തത്തിന് ചുറ്റും ഒരു ചതുരം വരയ്ക്കുക. എന്നിട്ട് ശരിയെന്ന് തോന്നുന്ന വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തുക.

- 2. തീവണ്ടി: സ്റ്റേഷൻ: കപ്പൽ:—
 - (a. കടൽ, b. കാൽ, c. തുറമുഖം, d. ബോട്ട്)

a	b	c	d
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക.

ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ മാവശത്ത് കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 6 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതത് ചോദ്യനമ്പറിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

TEST I

1. വിശപ്പ്: ആഹാരം: ദാഹം:—
(a. ക്ഷീണം b. തളർച്ച c. വെള്ളം d. വിശ്രമം)
2. മാല: കഴുത്തു: വള:—
(a. സ്വർണ്ണം b. കുപ്പിവള c. ഭംഗി d. കയ്യ്)
3. രക്തം: ചുവപ്പ്: മുടി:—
(a. തല b. കറുപ്പ് c. മനുഷ്യൻ d. നിറം)
4. അച്ഛൻ: അമ്മ: ഭർത്താവ്:—
(a. പത്നി b. ഗൃഹനായിക c. ഭാര്യ d. മാതാവ്)
5. മുളക്: എരിവ്: ശർക്കര:—
(a. പഞ്ചസാര b. കരിമ്പ് c. മധുരം d. പായസം)
6. അദ്യാപകൻ: വിദ്യാർത്ഥി: ഗുരു:—
(a. കുട്ടി b. പള്ളിക്കൂടം c. ശിഷ്യൻ d. ശിക്ഷ)
7. കാർ: ഡ്രൈവർ: കപ്പൽ
(a. കടൽ b. തുറമുഖം c. പാമരം d. കപ്പിത്താൻ)
8. സൂര്യൻ: വെയിൽ: ചന്ദ്രൻ:—
(a. ആകാശം b. നിലാവ് c. പ്രകാശം d. വെളിച്ചം)
9. ശാസ്ത്രം: ശാസ്ത്രജ്ഞൻ: കല:—
(a. കലാലയം b. കലാകാരൻ c. കലവറ d. കലാകേന്ദ്രം)
10. ക്ഷാ: പക്ഷി: കടുവ:—
(a. മൃഗം b. കാട് c. ഗൃഹം d. കൂട്)
11. പോലീസുകാരൻ: തൊപ്പി: രാജാവ്:—
(a. സിംഹാസനം b. കിരീടം c. രാജ്യം d. കൊട്ടാരം)
12. മഞ്ഞുകട്ട: വെള്ളം: വെള്ളം:—
(a. ജലം b. തീയ് c. നീരാവി d. ചൂട്)
13. കുന്നു: കുഴി: കയറം:—
(a. പർവ്വതം b. താഴ്വര c. റോഡ് d. ഇറക്കം)
14. പേന: മഷി: തോക്ക്:—
(a. വെടി b. യുദ്ധം c. വെടിയുണ്ട d. പട്ടാളക്കാരൻ)
15. സ്നേഹിതൻ: സ്നേഹം: ശത്രു:—
(a. വെറുപ്പ് b. യുദ്ധം c. ആയുധം d. വധം)
16. പട്ടി: മൃഗം: കുമ്പി:—
(a. പക്ഷി b. പാട്ട് c. കറുപ്പ് d. കൂട്)
17. സുന്ദരി; സുന്ദര്യ; വിരുപൻ
(a. വിരുപി b. സുന്ദരൻ c. വൈര്യം d. ഭംഗി)
18. കൊല്ലൻ: ഇരുമ്പ്: ആശാരി:—
(a. ആല b. ഉളി c. തടി d. ചുറ്റിക)
19. വീട്: ഗൃഹം: ആകാശം:—
(a. പക്ഷി b. ഗഗനം c. നീല d. മേഘം)
20. പണ്ഡിതൻ: പാമരൻ: പശ്ചിമം:—
(a. പടിഞ്ഞാറ് b. ദിക്കു c. കിഴക്ക് d. പൂർവ്വം)

TEST II

ഈ വിഭാഗത്തിലുള്ള ചോദ്യങ്ങളിൽ ഓരോന്നിലും അഞ്ചുവാക്കുകൾ വീതം തന്നിട്ടുണ്ട്. അതിൽ ഒന്ന് മാറ്റി നാലിനോടും യോജിക്കാതെ നിൽക്കുന്നു അത് ഏതെന്ന് കണ്ടുപിടിച്ചു, താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം

- 1. a. ബസ്സ്, b. ലോറി, c. കാർ, d. കാളവണ്ടി, e. മോട്ടോർ സൈക്കിൾ.

ഇതിൽ 'കാളവണ്ടി'യാണല്ലോ റോഡു നാലു വാക്കുകളോടും യോജിക്കാതെ നിൽക്കുന്നത്. 'കാളവണ്ടി'യെ കുറിക്കുന്ന അക്ഷരം റ്റയാണല്ലോ. അതുകൊണ്ട് റ്റയുടെ താഴെയുള്ള വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

a b c d e
o o o o o

ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടിവന്നാൽ Test-Iൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

- 2. a. ചിത്രകാരൻ, b. ചിത്രം, c. കവി, d. കലാകാരൻ, e ഗായകൻ.

a b c d e
o o o o o

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ മറുവശത്ത് കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 5 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അതത് ചോദ്യനമ്പരിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

TEST II

1. a. നദി, b. തോട്, c. കായൽ, d. കടൽ, e. സമതലം
2. a. അരി, b. ഗോതമ്പ്, c. ചോളം, d. ചണം, e. പയറ്റ്
3. a. പൂർവ്വം, b. പശ്ചിമം, c. ദക്ഷിണം, d. ഉത്തരം, e. ഉന്നതം
4. a. ചുകപ്പ്, b. ആകാശം, c. പച്ച, d. നീല, e. കറുപ്പ്
5. a. പിള്ള, b. മുല്ല, c. ജമന്തി, d. റോസ, e. പൂമാല
6. a. ആഞ്ചല്, b. നാരങ്ങ, c. ആപ്പിൾ, d. മുന്തിരിങ്ങ, e. ഉരുളപ്പഴം
7. a. സെൻറീമീറ്റർ, b. മില്ലീമീറ്റർ, c. മീറ്റർ, d. ഗ്രാം, e. കിലോമീറ്റർ
8. a. ഗാന്ധിജി, b. റെഹ്മാൻ, c. ഗോഖല, d. തിലകൻ, e. ലിങ്കൻ
9. a. കട്ടിൽ, b. മെത്ത, c. ശേഷ, d. വിരിപ്പ്, e. തലയിണ
10. a. ഫുട്ബോൾ, b. ക്രിക്കറ്റ്, c. ഹോക്കി, d. ചതുരംഗം, e. വോളിബോൾ
11. a. സങ്കലനം, b. വ്യവകലനം, c. ഗുണനം, d. ഭരണഗണിതം, e. ഹരണം.
12. a. മാല, b. വള, c. ആരണം, d. മോതിരം, e. കമ്മൽ
13. a. ബാല്യം, b. കൗമാരം, c. യൗവ്വനം, d. വൃദ്ധൻ, e. വാർദ്ധക്യം
14. a. മുദംഗം, b. മദ്യം, c. തബല, d. ചെണ്ട, e. നാദസ്വരം
15. a. സംഗീതം, b. നാടകം, c. ചെറുകഥ, d. യാത്രാവിവരണം, e. നോവൽ
16. a. കേരളം, b. മദ്രാസ്, c. മൈസൂർ, d. ആന്ധ്ര, e. ഡൽഹി
17. a. ഭൂമി, b. ബുധൻ, c. ശുക്രൻ, d. ചന്ദ്രൻ, e. വ്യാഴം
18. a. എരിവ്, b. മധുരം, c. പുളി, d. മുള്ളക്, e. ക്ഷുച്ഛ്
19. a. ലക്ഷദ്വീപ്, b. ആൻഡമാൻസ്, c. നിക്കോബാർ,
d. സിലോൺ, e. കാഷ്മീർ
20. a. ഇംഗ്ലീഷ്, b. മലയാളം, c. ഹിന്ദി, d. തമിഴ്, e. തെലുങ്ക്

TEST III

ഈ വിഭാഗത്തിൽ ഏതാനും പഴഞ്ചൊല്ലുകൾ കൊടുത്തിരിക്കുന്നു. ഓരോ പഴഞ്ചൊല്ലിനും അതിന്റെ അർത്ഥം ഏതാണ്ട് വ്യക്തമാക്കുന്ന നാല് ഉത്തരങ്ങൾ വീതം കൊടുത്തിട്ടുണ്ട്. ഇവയിൽ ഓരോ പഴഞ്ചൊല്ലിന്റെയും അർത്ഥം ഏറ്റവും വ്യക്തമാക്കുന്ന ഉത്തരം ഏതാണെന്ന് കണ്ടുപിടിച്ചു. താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം:--

- 1. അപ്പം തിന്നാൽപോരെ, കുഴിയെണ്ണുന്നമോ.
 - a. ആഹാരകാര്യത്തിൽ മാത്രം ശ്രദ്ധിക്കുന്ന ചിലവുണ്ട്.
 - b. നിസ്സാര കാര്യങ്ങൾക്ക് പ്രാധാന്യം കൽപ്പിക്കുന്ന ചില ആളുകളുണ്ട്.
 - c. ഒരു കാര്യത്തിന്റെയും ഉത്ഭവത്തെക്കുറിച്ച് അന്വേഷിക്കരുത്.
 - d. ആവശ്യമില്ലാത്ത കാര്യങ്ങളറിയാൻ നാം ഒരിക്കലും വെമ്പൽ കാണിക്കരുത്.

ഇവയിൽ ഏറ്റവും ശരിയായ ഉത്തരം നാലാമത്തേത് ആണല്ലോ. അതായത് d അതുകൊണ്ട് d യ്ക്ക് താഴെയുള്ള വൃത്തത്തിൽ അടയാളപ്പെടുത്തുക.

a	b	c	d
0	0	0	0

ഈ രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടിവന്നാൽ Test I-ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

- 2. ഉത്സാഹമുണ്ടെങ്കിൽ അത്താഴമുണ്ണം.
 - a. ഉത്സാഹിക്കുന്നവനേ അത്താഴം കഴിക്കാൻ സാധിക്കുകയുള്ളൂ.
 - b. പരിശ്രമിച്ചാൽ കാര്യം സാധിക്കും.
 - c. ഏത് കാര്യത്തിനും ഉത്സാഹം വേണ്ടതാണ്.
 - d. ഉത്സാഹിക്കുന്നവനേ വിജയിക്കുകയുള്ളൂ.

a	b	c	d
0	0	0	0

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ അടുത്ത പുറങ്ങളിൽ തന്നിട്ടുണ്ട് അവ ചുഴുവൻ ചെയ്യേണ്ടതിന് 3 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റേയും ഉത്തരം അതത് ചോദ്യനമ്പരിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രമിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

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TEST III

1. എല്ലുമുറിയെ പണിതാൽ പല്ലുമുറിയെ തിന്നാം.
 - a കഠിനമായി അഭ്യാസിക്കുന്നവർക്കേ ആഹാരം കഴിക്കാൻ സാധിക്കുകയുള്ളൂ.
 - b കഠിനാഭ്യാസം ചെയ്യുന്നവർ അധികം ആഹാരം കഴിക്കുന്നത് പല്ലിന് കേടാണ്.
 - c കഠിനമായി അഭ്യാസിച്ചാൽ നമുക്ക് ശരിയായി കഴിക്കാനുള്ള ആഹാരവും സമ്പാദിക്കാം.
 - d കഠിനാഭ്യാസം ചെയ്യുന്നവരെ ധാരാളം ആഹാരം കഴിക്കാവി.
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2. ചൊട്ടയിലെ ശീലം ചുടലവരെ.
 - a കുട്ടിക്കാലത്ത് അഭ്യസിക്കുന്ന ശീലമാണ് നല്ലത്.
 - b കുട്ടിക്കാലത്ത് നല്ല കാര്യങ്ങൾ ശീലിക്കണം.
 - c ഏതു കാര്യവും ചെറുപ്പത്തിലേ ശീലിക്കേണ്ടതാണ്.
 - d കുട്ടിക്കാലത്ത് അഭ്യസിച്ചത് ജീവാവസാനംവരെ നിലനിൽക്കും.
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3. പഞ്ചെത്തിനാൽ പനയും തിന്നാം.
 - a സാവധാനം കഴിച്ചാൽ നമുക്ക് ധാരാളം ക്ഷീണിക്കാൻ സാധിക്കും.
 - b സാവധാനത്തിൽ ചെയ്താൽ എത്ര പ്രയാസമുള്ള ജോലിയും നമുക്ക് ചെയ്തു തീർക്കാം.
 - c ഏതു ജോലിയും സാവധാനത്തിൽ ചെയ്യേണ്ടതുണ്ട്.
 - d സാവധാനത്തിൽ ചെയ്യുന്ന പ്രവർത്തിയാണ് എപ്പോഴും നല്ലത്.
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4. അണ്ടിയോടടുത്തേതേ മാങ്ങയുടെ പുളിയറിയും.
 - a മാങ്ങയുടെ പുറ കണ്ടാൽ അതിന്റെ പുളിയറിയൻ ഒക്കുകയില്ല.
 - b അടുത്ത പെരുമാറ്റംകൊണ്ടേ യഥാർത്ഥ സ്വഭാവം മനസ്സിലാക്കാൻ സാധിക്കൂ.
 - c ചില ആളുകളോട് കൂടുതൽ അടുക്കാൻ പാടില്ല.
 - d യഥാർത്ഥ സ്വഭാവം മനസ്സിലാക്കാതെ ആരോടും അടുക്കരുത്.
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5. മഞ്ഞപ്പിത്തം പിടിച്ചാൽ കാണുന്നതെല്ലാം മഞ്ഞ.
 - a ദോഷൈകദ്വേഷകൾ എവിടെയും ദോഷം മാത്രമെ കാണുകയുള്ളൂ.
 - b നാം എതിന്റെയും നല്ലവശം കാണേണ്ടതാണ്.
 - c ദുഷ്ടന്മാർ തിന്മ ചെയ്യുന്നു.
 - d ദോഷം ചെയ്യുന്ന ആളുകൾക്ക് നന്മ കൈവരുകയില്ല.
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6. ആർക്കാനിരൂപടിക്കും അവനവ് തവിടിടിക്കുകയില്ല.
 - a സ്വന്തം നന്മക്കുവേണ്ടി താതൊന്നും പ്രവർത്തിക്കാത്ത ആളുകളുണ്ട്.
 - b നിസ്വാർത്ഥ സേവനം ജീവിതലക്ഷ്യമായി കരുതുന്നവരുണ്ട്.
 - c ചിലർ സ്വാർത്ഥ താൽപ്പര്യം തീരെയില്ലാത്തവരാണ്.
 - d ചില ആളുകൾ അന്യർക്കുവേണ്ടി കഠിനമായി അഭ്യാസിക്കുകയും അവനവനുവേണ്ടി നിസ്വാർകാര്യങ്ങൾപോലും പ്രവർത്തിക്കാതിരിക്കുകയും ചെയ്യാറുണ്ട്.

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7. മെത്തമേൽ കിടന്നാൽ വിദ്യയുണ്ടാവില്ല.
- a മെത്തമേൽ കിടക്കാൻ സുഖമാണ്
 - b സുഖിയൻമാർക്ക് ശ്രേയസ്സുണ്ടാകുകയില്ല.
 - c ചില ആളുകൾ എപ്പോഴും വിശ്രമിക്കാൻ ആഗ്രഹിക്കുന്നു.
 - d എപ്പോഴും വിശ്രമിക്കുന്നതു നന്നല്ല.
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8. മടിയൻ മല ചുമക്കും.
- a അന്നന്നുള്ള ജോലി കൃത്യമായി ചെയ്യാത്ത ആളുകൾക്ക് ഒടുവിൽ എല്ലാം കൂടി ഒരുമിച്ച് ചെയ്യേണ്ടിവരും.
 - b മടിയൻമാരായ ആളുകൾക്ക് ഭാരമുള്ള വസ്തുക്കൾ ചുമക്കേണ്ടിവരും.
 - c മടിയൻമാർക്ക് ജോലി ചെയ്യുന്നത് മല ചുമക്കുന്നതിന് സമമാണ്.
 - d കൃത്യമായി ജോലി ചെയ്യാത്തവർ വിഷമിക്കും.
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9. ഇരുട്ടുകൊണ്ട് ഓട്ടയടക്കുക.
- a സൂത്രപ്പണികൊണ്ട് കാര്യം സാധിക്കുക.
 - b തെറ്റായ പ്രവർത്തി ചെയ്യുക.
 - c കൃത്യസമയത്ത് കാര്യങ്ങൾ ചെയ്യാതിരിക്കുക.
 - d ഒഴുവുകഴിവുകൾ പറഞ്ഞു കാര്യങ്ങൾ സാമസ്യപ്പെടുമെന്നു കരുതുക.
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10. മൂക്കില്ലാ നാട്ടിൽ മുറിമുക്കൻ രാജാവ്.
- a തീറെ കഴിവില്ലാത്തതിനേക്കാൾ അൽപ്പം കഴിവുള്ളതാണ് നല്ലത്.
 - b നമുക്കുള്ള ചെറിയ കഴിവുകൾ മറ്റുള്ളവരുടെ മുമ്പിൽ കാണിച്ചാൽ മഹാൻമാരാകാം.
 - c നിസ്സാര കഴിവുള്ളവർ കേമൻമാരാകും.
 - d നിസ്സാരൻമാരുടെ കൂട്ടത്തിൽ നിസ്സാരമായ കേമത്തുള്ളവർ മഹാൻമാരാണ്.
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11. കക്കാൻ പാിച്ചാൽ പോര നിൽക്കാനും പഠിക്കണം.
- a കർമ്മം ചെയ്യുവാനിറങ്ങിയാൽ അതുമൂലമുണ്ടാകുന്ന ഭവിഷ്യത്തുകൾ നേരിടാനും അറിഞ്ഞിരിക്കണം.
 - b നാം ചെയ്യുന്ന പ്രവൃത്തിയുടെ ഫലം നാം തന്നെ അനുഭവിക്കണം.
 - c എന്തു പ്രവർത്തിയും ധൈര്യത്തോടെ ചെയ്യണം.
 - d നാം ചെയ്യുന്ന പ്രവർത്തികളെല്ലാം നല്ലതായിരിക്കണം.
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12. അട്ടെപ്പിടിച്ച് മെത്തമേൽ കിടത്തിയാൽ കിടക്കുമോ ?
- a ദുർജ്ജനങ്ങളെ നന്നാക്കാൻ ശ്രമിക്കുന്നത് വെറുതെയാണ്.
 - b ദുർജ്ജനങ്ങൾ നന്നാക്കാൻ ഇഷ്ടപ്പെടുന്നില്ല.
 - c ചില ആളുകൾ സുഖിക്കാൻ ഇഷ്ടപ്പെടുന്നില്ല.
 - d വിഫലശ്രമം ചെയ്തിട്ട് കാര്യമില്ല.
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13. അങ്ങാടിയിൽ തോറ്റതിനമ്മയോട്.
- a വേണ്ടിടത്ത് പ്രവർത്തിക്കേണ്ടത് വേണ്ടാത്ത സ്ഥാനത്ത് കാണിക്കുക.
 - b ഓരോ സ്ഥലത്ത് ഓരോ രീതിയിൽ പ്രവർത്തിക്കുക.
 - c സന്ദർഭം അറിയാതെ പ്രവർത്തിക്കുക.
 - d വേണ്ടാത്ത കാര്യം പ്രവർത്തിക്കുക.

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14. മിണ്ടാപ്പുള്ള കലയുടെ പറ്റം
- a നിരപരാധിത്വം നടിക്കുന്നവരാൽ അറിയാതെ വലിയ അപരാധികൾ.
 - b ആദ്യം മിണ്ടാതിരിക്കുന്നവരാണ് ഒടുവിൽ തൊറ്റു ചെയ്യുന്നത്.
 - c പുച്ഛ ശാന്തസ്വഭാവമുള്ള രൂപമാണ്.
 - d ഏതു പ്രവർത്തിയും നിശ്ശബ്ദമായി ചെയ്താൽ ആപത്തുണ്ടാകുന്നതാണ്.
-

15. വിളയുടെ വിത്ത് മുളയിലറിയാം
- a വിത്തിന്റെ വിളവ് മുളയിലേ നോക്കി മനസ്സ് ലാക്കാൻ സാധിക്കും.
 - b ചെറുപ്രായത്തിലേതന്നെ ഭാവനയിലെങ്ങനെയായതായിരുമെന്ന് മനസ്സിലാക്കാം.
 - c ചെറുപ്രായത്തിൽ കാണിക്കുന്ന ശീലമാണ് ഭാവനയിലും കാണിക്കുന്നത്.
 - d നല്ലതു ചെയ്യുന്നവർക്കേ നന്മ വരികയുള്ളൂ.
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16. അണ്ണാൻകുഞ്ഞും തന്നാലായത്.
- a നിസ്സാരന്മാർ വെറുതെയിരിക്കാൻ പാടില്ല.
 - b നിസ്സാരന്മാർക്ക് അൽപ്പമായിട്ടെങ്കിലും വല്ലതും പ്രവർത്തിക്കാൻ കഴിയും.
 - c നിസ്സാരന്മാരായ ആളുകൾ ചെയ്യുന്ന പ്രവർത്തിയാണ് നല്ലത്.
 - d ചില ആളുകൾ ചെയ്യുന്നത് നാം നിസ്സാരമായി കരുതുന്നു.
-

17. ഉപ്പു തിന്നാൻ വെള്ളം കുടിക്കും.
- a തിൻമചെയ്യുന്നവൻ അതിന്റെ ഫലം അനുഭവിക്കും.
 - b ഉപ്പു കൂടുതൽ കഴിക്കുന്നവന് വെള്ളം കുടിക്കേണ്ടിവരും.
 - c ഒരൊരും ചെയ്യുന്ന പ്രവർത്തിക്കനുസരിച്ചുള്ള ഫലം അയാൾക്ക് കിട്ടും.
 - d നല്ലാണു് ആലോചിച്ചേ ഏത് പ്രവർത്തിയും ചെയ്യാവൂ.
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18. ചേര തിന്നുന്ന നാട്ടിൽചെന്നാൽ- നടക്കണം തിന്നണം.
- a കാലദേശികൾക്കനുസരിച്ചു നമ്മുടെ സ്വഭാവവും പെരുമാറ്റവും മാറ്റണം.
 - b ഒരു സ്ഥലത്ത് ചെന്നാൽ അവിടത്തെ എല്ലാ രീതികളും ശീലിക്കേണ്ടതാണ്.
 - c ചില രാജ്യത്തിലെ ജനങ്ങൾ ചേരയെ തിന്നുന്നവരാണ്.
 - d നാം ഏതാഹാരവും കഴിക്കുന്നതിന് ശീലിക്കണം.
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19. അഴകുള്ള ചക്കയിൽ ചുളയില്ല.
- a കാഴ്ചക്ക് ഭംഗിയുള്ള ചക്കയിൽ ചുള കാണുകയില്ല.
 - b കാഴ്ചക്ക് മനോഹരമായി തോന്നുന്ന വസ്തുവിന്റെ ഉള്ളിൽ കഴമ്പുണ്ടാകുകയില്ല.
 - c ഭംഗിയുള്ള വസ്തുക്കളുടെ ഉള്ളിൽ പൊള്ളതായിരിക്കും.
 - d ഒരു വസ്തുവിന്റെയും ചുളയുള്ള ഭംഗി കണക്കാക്കരുത്.
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20. മിന്നുന്നതെല്ലാം പൊന്നല്ല.
- a ബാഹ്യ സ്വഭാവവും ആന്തരസ്വഭാവവും ഒന്നല്ല.
 - b തിളങ്ങുന്ന വസ്തുക്കളെല്ലാം സ്വർണ്ണമാംഗിരിക്കണമെന്നില്ല.
 - c പൊന്ന് എല്ലാവർപ്പോഴും മിന്നണമെന്നില്ല.
 - d പുറംമോടി കണ്ട് ഭ്രമിക്കരുത്.

TEST IV

ഈ വിഭാഗത്തിലുള്ള ചോദ്യങ്ങളിൽ ഓരോന്നിലും കുറെ സംഖ്യകൾ ഓരോ ക്രമത്തിൽ കൊടുത്തിരിക്കുന്നു. ഒന്ന് എഴുതാതെയും വിട്ടിരിക്കുന്നു. ബ്രാക്കറ്റിൽ കൊടുത്തിട്ടുള്ളതിൽ നിന്ന് ശരിയായ സംഖ്യ ഏതെന്ന് കണ്ടുപിടിച്ചു. താഴെക്കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക.

ഉദാഹരണം:--

1. 7, 6, 7, 8, 7, — (a^7 , b^6 , c^4)

6, 8 എന്ന ക്രമത്തിൽ അടുത്തതായി വരേണ്ട സംഖ്യ 10 ആണ്. അതായത് b ആണ് ശരിയായ ഉത്തരം. അതുകൊണ്ട് b യ്ക്ക് താഴെയുള്ള വ്യത്യാസത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

a	b	c
0	0	0

ഈ രീതിയിൽ ഉത്തരക്കടലാസിൽ എഴുതുക. ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടി വന്നാൽ Test I-ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

2. 55, 50, 250, 245, —, 1270 (a 1225, b 1215, c 244)

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക.

ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ മറുവശത്ത് കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 6 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക. ഓരോ ചോദ്യത്തിന്റേയും ഉത്തരം അതത് ചോദ്യനമ്പറിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രദ്ധിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

TEST IV

- | | |
|--|---|
| 1. 2, 4, 6, 8, 10— | (a 20, b 12, c 14) |
| 2. $\frac{1}{2}, \frac{4}{5}, \frac{5}{6}, \frac{6}{7}, \frac{7}{8}$ — | (a $\frac{7}{10}$, b $\frac{8}{9}$, c $\frac{1}{2}$) |
| 3. 5, 9, 13, 17, 21,— | (a 25, b 8+, c 7) |
| 4. 40, $\frac{1}{10}$ 30, $\frac{1}{30}$ 20,— | (a 20, b 10, c $\frac{10}{20}$) |
| 5. 96, 48, 24, 12, 6,— | (a 3, b 2, c $\frac{1}{2}$) |
| 6. 82, 79, 76, 73, 70,— | (a 66, b 73, c 67) |
| 7. 18, 21, 25, 30, 36,— | (a 29, b 43, c 252) |
| 8. 90, 81; 72, 63, 51,— | (a 6, b 45, c 18) |
| 9. 12, 14, 13, 15, 14, — | (a 15, b, 17, c 16) |
| 10. 120, 60, 30, 15, 7 $\frac{1}{2}$,— | (a 8, b 3 $\frac{1}{2}$, c 1 $\frac{1}{8}$) |
| 11. 1, 1, —, 3, 5, 5 | (a 2, b 3, c 1) |
| 12. 50, 46, 42, 38, —, 30 | (a 26, b 34, c 56) |
| 13. 29, 28, 19, 18, 9,— | (a 8, b 6, c 17) |
| 14. 0, 3, 0, 5, —, 7 | (a 0, b 5, c 7) |
| 15. 11, 2, 9, 2, 16, 19, — | (a 7, b 5, c 2) |
| 16. 21, 17, 20, 16, 19,— | (a 15, b 28, c 18) |
| 17. 3, 4, 6, 9, 13, — | (a 15, b 18, c 17) |
| 18. 95, 80, 90, 85, —, 80 | (a 85, b 75, c 80) |
| 19. 1, 4, 9, 16, 25, — | (a 34, b 37, c 36) |
| 20. 75, 73, 70, 66, 61, — | (a 55, b 5, c 57) |

TEST V

ഈ വിഭാഗത്തിൽ കൊടുത്തിട്ടുള്ള ചോദ്യങ്ങളിൽ ചിലതിന് മൂന്നും മറ്റുള്ളവക്ക് നാലും ഉത്തരങ്ങൾ വീതം കൊടുത്തിട്ടുണ്ട്. അവയിൽ ശരിയായ ഉത്തരം ഏതെന്ന് കണ്ടുപിടിച്ച് താഴെ കാണിച്ചിരിക്കുന്ന രീതിയിൽ ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

ഉദാഹരണം:—

1. ജയക്ക് ഷീലയേക്കാൾ പൊക്കം കുറവാണ്. തങ്കത്തിനാണ് ഷീലയേക്കാൾ പൊക്കം കൂടുതൽ. എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞത് ആരാണ്?

a ജയ, b ഷീല c തങ്കം

ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞത് ജയ ആണല്ലോ. അതായത് a ആണ് ശരിയായ ഉത്തരം. അതുകൊണ്ട് a യ്ക്ക് താഴെയുള്ള വൃത്തത്തിനകത്ത് അടയാളപ്പെടുത്തിയിരിക്കുന്നു.

a b c
○ ○ ○

ഈ രീതിയിൽ ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം ഉത്തരക്കടലാസിൽ എഴുതുക ഏതെങ്കിലും ഉത്തരം തിരുത്തേണ്ടിവന്നാൽ Test-1ൽ പറഞ്ഞതുപോലെ ചെയ്യുക.

2. ക്ലാസ്സിൽ നാലു കുട്ടികൾ ഒരു ബഞ്ചിലാണിരിക്കുന്നത്. ജോൺ, മാത്യുവിന്റെ ഇടതുവശത്തും റഷീദിന്റെ വലതുവശത്തുമായിട്ടാണിരിക്കുന്നത്. റഷീദ് അശോകന്റെ വലതുവശത്താണ്. എന്നാൽ ഏറ്റവും ഇടതുവശത്തിരിക്കുന്നതാരാണ്?

a. ജോൺ, b മാത്യു, c റഷീദ്, d അശോക്

a b c d
○ ○ ○ ○

ശരിയായ ഉത്തരം ഏതെന്ന് ആലോചിക്കുക. ഇതേ രീതിയിലുള്ള 20 ചോദ്യങ്ങൾ അടുത്ത പുറങ്ങളിൽ കൊടുത്തിരിക്കുന്നു. അവ മുഴുവൻ ചെയ്യുന്നതിന് 10 മിനിട്ട് സമയമാണുള്ളത്.

ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരമെഴുതുക. ഓരോ ചോദ്യത്തിന്റെയും ഉത്തരം അത്ത് ചോദ്യനമ്പരിന് നേരെ അടയാളപ്പെടുത്തുവാൻ ശ്രമിക്കുക.

പറഞ്ഞതിനുശേഷം മാത്രം പുറം മറിക്കുക.

TEST V

1. റാണി റൂബിക്ക് മുബെ ജനിച്ചു. ലീന റാണിയെക്കാൾ മുബെ ജനിച്ചു. എന്നാൽ ഈ മൂന്നു പേരിൽ മുബെ ജനിച്ചതാരാണ്?
a. റാണി b. റൂബി c. ലീന

2. അച്ഛനും അമ്മയും മകനും മകളും കൂടി നടക്കാനിറങ്ങി. മകൻ അച്ഛന്റെ മുഖിലാണ് നടന്നിരുന്നത്. മകൾ അച്ഛന്റെ പുറകിലും അമ്മയെക്കാൾ മുഖിലുമാണ് നടന്നിരുന്നത്. എന്നാൽ ഏറ്റവും പുറകെ നടന്നതാരാണ്?
a. അച്ഛൻ b. അമ്മ c. മകൻ d. മകൾ

3. രാധ ലീലയെക്കാൾ കൂടുതൽ മാർക്ക് വാങ്ങി. രമക്ക് ലീലക്ക് കിട്ടിയതിനേക്കാൾ കുറവ് മാർക്കാണ് കിട്ടിയത്. എന്നാൽ ആരാണ് കൂടുതൽ മാർക്ക് വാങ്ങിയത്?
a. രാധ b. ലീല c. രമ

4. രമണി പത്മയെക്കാൾ സൂപ്പർമാർക്ക്. ലൈല രമണിയെക്കാൾ സൂപ്പർമാർക്ക് കൂടുതൽ മാർക്ക് വാങ്ങി. എന്നാൽ അവരിൽ ഏറ്റവും സൂപ്പർമാർക്ക് ആരാണ്?
a. രമണി b. പത്മ c. ലൈല

5. രവിക്ക് തോമസിനെക്കാൾ വേഗത്തിലും ഹരിയോടൊപ്പം ഓടാൻ സാധിക്കും. എന്നാൽ രാജൻ രവിയെക്കാൾ വേഗത്തിൽ ഓടും. ഇവരിൽ ഏറ്റവും വേഗത്തിൽ ഓടുന്നതാരാണ്?
a. രവി b. തോമസ് c. ഹരി d. രാജൻ

6. ബാലൻ നല്ലവനാണ്. രാമു ബാലനേക്കാൾ നല്ലവൻ. ഹരി രാമുവോളം നല്ലവനല്ലെങ്കിലും ഗോപിയെക്കാൾ നല്ലവനാണ്. ഗോപിയാവട്ടെ ബാലനോളം നല്ലവനല്ല. എന്നാൽ ഏറ്റവും നല്ലവനാരാണ്?
a. ബാലൻ b. രാമു c. ഹരി d. ഗോപി

7. രാജു രഘുവിന്റെ മുബെ നടക്കുന്നു. അപ്പുവിന്റെ പുറകിലാണ് രാജു നടക്കുന്നത്. എന്നാൽ ഏറ്റവും പുറകിൽ നടക്കുന്നതാരാണ്?
a. രാജു b. രഘു c. അപ്പു

8. പാഠിത്യത്തിൽ ശരശ്ചന്ദ്രനെക്കാൾ മിടുക്കനാണ് പ്രേമചന്ദ്രൻ. ബാലചന്ദ്രൻ പ്രേമചന്ദ്രനെക്കാൾ മിടുക്ക് കുറവാണ്. മോഹനചന്ദ്രൻ പ്രേമചന്ദ്രനെക്കാൾ മിടുക്കനാണ്. എന്നാൽ ഇവരിൽ ആരാണ് ഏറ്റവും മിടുക്കൻ?
 a ശരശ്ചന്ദ്രൻ b പ്രേമചന്ദ്രൻ c ബാലചന്ദ്രൻ d മോഹനചന്ദ്രൻ

9. കൃഷ്ണൻ ഗോപുവിനെക്കാൾ പൊക്കം കൂടുതലും, വേണുവിനെക്കാൾ പൊക്കം കുറവുമാണ്. സോമൻ വേണുവിനെക്കാൾ പൊക്കം കൂടുതലുണ്ട്. എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കൂടിയവനാരാണ്?
 a കൃഷ്ണൻ b ഗോപു c വേണു d സോമൻ

10. സതി അംബികയോളവും വൽസ വസന്തയോളവും സുന്ദരിയാണ്. സതി വൽസയോളം സുന്ദരിയല്ലെങ്കിൽ ഏറ്റവും സുന്ദരി ആരാണ്?
 a സതി b അംബിക c വൽസ d വസന്ത

11. A ക്കും B യെക്കാൾ പൊക്കം കൂടുതലും C യെക്കാൾ പൊക്കം കുറവുമാണ്. C ക്കും D ക്കും ഒരേ പൊക്കമാണ്. എന്നാൽ ഇവരിൽ ഏറ്റവും പൊക്കം കുറഞ്ഞവൻ ആരാണ്?
 a A b B c C d D

12. A യോളം ഭാരം B ക്കും B യെക്കാൾ ഭാരം C ക്കുമുണ്ട്. D യുടെ ഭാരം C യുടേതിനെക്കാൾ കുറവുമാണ്. A യുടേതിനെക്കാൾ കൂടുതലായാൽ ഏറ്റവും കൂടുതൽ ഭാരമുള്ളതാർക്കാണ്?
 a A b B c C d D

13. ഒരു നീന്തൽ മത്സരത്തിൽ ഭാസി വിജയനെക്കാൾ പുറകിലായിരുന്നെങ്കിലും രാധാകൃഷ്ണനെക്കാൾ മുമ്പിലായിരുന്നു. രാമചന്ദ്രൻ വിജയനെക്കാൾ മുമ്പിലായിരുന്നു. എന്നാൽ ഏറ്റവും മുമ്പിൽ ആരായിരുന്നു?
 a ഭാസി b വിജയൻ c രാധാകൃഷ്ണൻ d രാമചന്ദ്രൻ

14. ഒരു ഓട്ടപ്പന്തത്തിൽ ഗോപി ചന്ദ്രനെക്കാൾ മുമ്പിലായിരുന്നു. ശശി രാമുവിനെക്കാൾ മുമ്പിലായിരുന്നു. ചന്ദ്രനും ശശിയും ഒരേ ലവലിലായിരുന്നു. എന്നാൽ ആരാണ് മത്സരത്തിൽ ജയിച്ചത്?
 a ഗോപി b ചന്ദ്രൻ c ശശി d രാമു

15. ഉണ്ണികൃഷ്ണൻ സതീശനെക്കാൾ ബുദ്ധിമുട്ടാണ്. ഗോപൻ ജോയിയെക്കാൾ ബുദ്ധി കുറഞ്ഞവനാണ്. സതീശൻ ജോയിയെക്കാൾ ബുദ്ധിമുട്ടാണ്. എന്നാൽ ഏറ്റവും കൂടുതൽ ബുദ്ധിമുട്ടുള്ളതാർക്കാണ്?

- a ഉണ്ണികൃഷ്ണൻ b സതീശൻ c ഗോപൻ d ജോയി

16. ക്ലാസിൽ ശോഭയുടെ ഇടുവശത്താണ് ജമീല ഇരിക്കുന്നത്. ശോഭയുടെ വലതുവശത്താണ് മേരി ഇരിക്കുന്നത്. എന്നാൽ നടുവിൽ ഇരിക്കുന്നതാർ?

- a മേരി b ജമീല c ശോഭ

17. ലതയെക്കാൾ പാപ്പുന്ദ് ഹേമ. കുമാരിയെക്കാൾ പാപ്പുന്ദ് ലത. ശാരിയെക്കാൾ പാപ്പുന്ദ് കുമാരി. എന്നാൽ ഏറ്റവും കൂടുതൽ പാപ്പുന്ദ് ഇതാർക്ക്?

- a ലത b കുമാരി c ശാരി d ഹേമ

18. ഒരു വരിയുടെ രണ്ടാമത് നിന്നെണ്ണിനോക്കിയാലും ഉമ അന്ധമാണ്. എന്നാൽ ആ വരിയിൽ എത്രപേരുണ്ട്?

- a 10 b 11 c 7 d 9

19. ലക്ഷ്മി സുശീലയെക്കാൾ സുമ്യശീലയാണ്. മാലിനി ലക്ഷ്മിയെക്കാൾ സുമ്യശീലയാണ്. മാലിനിക്ക് വനജയെ അപേക്ഷിച്ച് സുമ്യശീലം വളരെ കുറവാണ്. എന്നാൽ ഏറ്റവും സുമ്യശീല ആരാണ്?

- a ലക്ഷ്മി b സുശീല c മാലിനി d വനജ

20. AB, CD, EF, GH ഇവ നാല് രേഖകളാണ്. GH രേഖ AB യെക്കാൾ വലുതും EF നെക്കാൾ ചെറുതുമണ്. EF, CDയെക്കാൾ ചെറുതാണെങ്കിൽ ഏറ്റവും നീളം കുറഞ്ഞ രേഖ ഏത്?

- a AB b CD c EF d GH

KERALA UNIVERSITY GROUP TEST OF INTELLIGENCE (VERBAL) SCORE SHEET

Name Std. School.....

TEST - I					TEST - II					TEST - III					TEST - IV					TEST - V				
1	A	B	C	D	1	A	B	C	D	1	A	B	C	D	1	A	B	C	D	1	A	B	C	D
2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
3	0	0	0	0	2	0	0	0	0	2	0	0	0	0	2	0	0	0	0	2	0	0	0	0
4	0	0	0	0	3	0	0	0	0	3	0	0	0	0	3	0	0	0	0	3	0	0	0	0
5	0	0	0	0	4	0	0	0	0	4	0	0	0	0	4	0	0	0	0	4	0	0	0	0
6	0	0	0	0	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
7	0	0	0	0	6	0	0	0	0	6	0	0	0	0	6	0	0	0	0	6	0	0	0	0
8	0	0	0	0	7	0	0	0	0	7	0	0	0	0	7	0	0	0	0	7	0	0	0	0
9	0	0	0	0	8	0	0	0	0	8	0	0	0	0	8	0	0	0	0	8	0	0	0	0
10	0	0	0	0	9	0	0	0	0	9	0	0	0	0	9	0	0	0	0	9	0	0	0	0
11	0	0	0	0	10	0	0	0	0	10	0	0	0	0	10	0	0	0	0	10	0	0	0	0
12	0	0	0	0	11	0	0	0	0	11	0	0	0	0	11	0	0	0	0	11	0	0	0	0
13	0	0	0	0	12	0	0	0	0	12	0	0	0	0	12	0	0	0	0	12	0	0	0	0
14	0	0	0	0	13	0	0	0	0	13	0	0	0	0	13	0	0	0	0	13	0	0	0	0
15	0	0	0	0	14	0	0	0	0	14	0	0	0	0	14	0	0	0	0	14	0	0	0	0
16	0	0	0	0	15	0	0	0	0	15	0	0	0	0	15	0	0	0	0	15	0	0	0	0
17	0	0	0	0	16	0	0	0	0	16	0	0	0	0	16	0	0	0	0	16	0	0	0	0
18	0	0	0	0	17	0	0	0	0	17	0	0	0	0	17	0	0	0	0	17	0	0	0	0
19	0	0	0	0	18	0	0	0	0	18	0	0	0	0	18	0	0	0	0	18	0	0	0	0
20	0	0	0	0	19	0	0	0	0	19	0	0	0	0	19	0	0	0	0	19	0	0	0	0
	0	0	0	0	20	0	0	0	0	20	0	0	0	0	20	0	0	0	0	20	0	0	0	0

LETTER MATRICES

6

25

ABP	CDR
APB	?

26

AC	EA
E	C
PR	?
T	

27

AB	BA
CD	EF
PQ	?
RS	

28

AB	BC
BC	BA
LM	?
MN	

29

PQ	LM
RS	NO
SR	?
QP	

30

PQ	SP
SR	RO
AB	?
DC	

Test of Intelligence

Set: I

DR. A. SUKUMARAN NAIR

Prof. Head. Department of Education

University of Calicut

Department of Education

University of Calicut

1984

നിർദ്ദേശങ്ങൾ

ഇംഗ്ലീഷ് അക്ഷരമാലയിലെ 20 അക്ഷരങ്ങൾ ഉപയോഗിച്ച് ഉണ്ടാക്കിയുള്ള ചില കള്ളികൾ താഴെ കൊടുത്തിരിക്കുന്നു. ഈ കള്ളികൾ ചില പ്രശ്നങ്ങളുടെ രൂപത്തിലാണ് തയ്യാറാക്കിയിരിക്കുന്നത്. നിങ്ങൾക്ക് ഈ പ്രശ്നങ്ങളുടെ ഉത്തരം കണ്ടെത്താൻ കഴിയുമോ? ഉത്തരം കണ്ടുപിടിക്കാനുള്ള മാർഗ്ഗങ്ങൾ താഴെ നിർദ്ദേശിച്ചിരിക്കുന്നു.

പ്രശ്നങ്ങൾ ഇംഗ്ലീഷ് അക്ഷരമാലയിലെ 26 അക്ഷരങ്ങളുടെ അടുക്കനെ ആശ്രയിച്ചാണ് നിർദ്ദേശിച്ചിരിക്കുന്നത്. അക്ഷരങ്ങൾ അവയുടെ ക്രമത്തിൽ 13 അക്ഷരങ്ങൾ വീതമുള്ള രണ്ടു വരികളിലായി താഴെ കൊടുത്തിരിക്കുന്നു.

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

ഇതിൽ അടങ്ങിയിരിക്കുന്ന അക്ഷരങ്ങളുടെ ക്രമം ഉപയോഗിച്ചാണ് പ്രശ്നങ്ങൾക്ക് പരിഹാരങ്ങൾ കണ്ടെത്തേണ്ടത്. പ്രശ്നങ്ങളുടെ മാതൃകകൾ താഴെ കൊടുത്തിരിക്കുന്നു.

ഉത്തരങ്ങൾ

B	B
B	?

A	B	C	D
	X		

4 ഉത്തരങ്ങൾ വലതുഭാഗത്ത് തന്നിരിക്കുന്നു. ഇവയിൽ ഏതുതരം തെറ്റെടുത്താൽ ചിത്രത്തിൽ ചോദ്യചിഹ്നം കാണിച്ചിരിക്കുന്ന ചതുരം പരാജയപ്പെടും?

രണ്ടുവരികളിലായി 4 ചതുരങ്ങൾ അടങ്ങിയിരിക്കുന്ന രൂപമാണ് ചിത്രത്തിൽ കൊടുത്തിരിക്കുന്നത്. താഴെത്തെ നിരയിലെ വലതു ചതുരത്തിലെ അക്ഷരം തന്നിട്ടില്ലെങ്കിലും അത് പൂർത്തിയാക്കാൻ നമുക്ക് കഴിയും. ഒന്നാമത്തെ നിരയിലെ ചതുരങ്ങൾ പരിശോധിച്ച് അതിന് ബാധകമായ നിരയോടൊന്നിനെ തിരക്കും ബാധകമാക്കുക. അപ്പോൾ ചിത്രം പൂർത്തിയാകുന്നതിന്

2

എന്ന അക്ഷരം താഴത്തെ വലതു മൂലയിലെ ചതുരത്തിൽ ഏഴുതിയാൽ മതിയാകും. അതുകൊണ്ട് ശരിയായ ഉത്തരം B ആണ്.

മറ്റൊരുദാഹരണം താഴെ കൊടുത്തിരിക്കുന്നു.

ഉത്തരങ്ങൾ

A	B
P	?

A	B	P	Q
			X

നാലു ആരങ്ങൾ തന്നിരിക്കുന്നു.

ഏതു ആരം നിങ്ങൾ തിരഞ്ഞെടുക്കും? എന്തുകൊണ്ട്? ശരിയായ ഉത്തരം Q ആണ്. ആദ്യത്തെ വരിയിൽ അടുത്ത അക്ഷരങ്ങളാണ് കൊടുത്തിരിക്കുന്നത്. അതേ നിയമം ഉപയോഗിച്ചാൽ P യുടെ അടുത്ത അക്ഷരമായ Q ആണ് ഉത്തരം എന്ന് കാണാം.

ഈ രൂപത്തിലുള്ള 30 പ്രശ്നങ്ങൾ തുടർന്നു തന്നിരിക്കുന്നു. ഏറ്റവും ചുരുങ്ങിയ സമയം കൊണ്ട് ഇവയ്ക്ക് ഉത്തരങ്ങൾ കാണേണ്ടതാണ്. സമയം 15 മിനിറ്റാണ്. ഉത്തരക്കടലാസിൽ ശരിയായ ഉത്തരത്തിനു ചുറ്റിൽ ഗുണനചിഹ്നം കൊണ്ട് സൂചിപ്പിക്കുക.

ഒന്നാം രണ്ടാം വരികളിൽ നിന്നും നിയമം കണ്ടുപിടിക്കുന്നതുപോലെ തന്നെ മൂന്നാമത്തെയും രണ്ടാമത്തെയും കോളങ്ങളെ ആസ്പദമാക്കിയും പ്രശ്നത്തിന് ഉത്തരം കണ്ടെത്താവുന്നതാണ്.

അദ്ധ്യാപകൻ പറയുമ്പോൾ മാത്രം ഉത്തരം കണ്ടുപിടിക്കാൻ തുടങ്ങുക.

3

1

A	A
B	?

2

C	D
C	?

3

A	C
B	?

4

D	F
C	?

5

C	A
D	?

6

D	E
A	?

7

A	C
D	?

9

B	F
D	?

9

A	C
N	?

10

B	O
D	?

11

P	C
R	?

12

O	N
B	?

13

B	N
D	?

14

C	E
O	?

15

Q	O
F	?

16

D	Q
A	?

17

B	Q
F	?

5

18

R	T
C	?

19

A	J
O	?

20

L	X
B	?

21

AA	CC
AB	?

22

EE	RR
DD	?

23

AOX	XOP
EOX	?

24

CA	RP
ACC	?

LETTER MATRIC TEST OF INTELLIGENCE SCORE SHEET

Name: Sex Male/Female School:

SET - I

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

1	A	B	C	D
2	D	C	E	B
3	A	B	C	D
4	C	D	E	F
5	D	C	B	A
6	A	B	C	D
7	A	C	D	F
8	H	C	G	E
9	D	M	B	P
10	C	E	Q	G
11	E	D	S	Q
12	O	A	C	P
13	P	C	A	M
14	P	Q	F	D
15	G	P	N	D

16	B	R	N	E
17	R	G	U	C
18	E	U	S	D
19	L	X	P	K
20	C	Y	N	M
21	AA	CD	DD	BB
22	QQ	EE	SS	EE
23	FOY	XOE	AOX	YOQ
24	AL	BDD	PRR	SQ
25	CPB	CRD	DRD	CDR
26	QSU	PRT	FBD	TPR
27	QPTU	PQTU	QPRS	CBGH
28	MNLM	MNXML	MLNM	CDCB
29	MLON	RSPQ	ONXML	PQSR
30	ABCD	RSQP	PQRS	DAXCB

LETTER MATRICES

Test of Intelligence

Set: II

DR. A. SUKUMARAN NAIR
Prof. Head. Department of Education
University of Calicut

Department of Education
University of Calicut

1984

നിർദ്ദേശങ്ങൾ

ഇംഗ്ലീഷ് അക്ഷരമാലയിലെ 26 അക്ഷരങ്ങൾ ഉപയോഗിച്ച് ഉണ്ടാക്കിയിട്ടുള്ള ചില കളികൾ താഴെ കൊടുത്തിരിക്കുന്നു. ഈ കളികൾ ചില പ്രശ്നങ്ങളുടെ രൂപത്തിലാണ് തയ്യാറാക്കിയിരിക്കുന്നത്. നിങ്ങൾക്ക് ഈ പ്രശ്നങ്ങളുടെ ഉത്തരം കണ്ടെത്താൻ കഴിയുമോ? ഉത്തരം കണ്ടുപിടിക്കാനുള്ള മാർഗ്ഗങ്ങൾ താഴെ നിർദ്ദേശിച്ചിരിക്കുന്നു.

പ്രശ്നങ്ങൾ ഇംഗ്ലീഷ് അക്ഷരമാലയിലെ 26 അക്ഷരങ്ങളുടെ അടുക്കിന്റെ ആശ്രയിച്ചാണിരിക്കുന്നത്. അക്ഷരങ്ങൾ അവയുടെ ക്രമത്തിൽ 13 അക്ഷരങ്ങൾ വീതമുള്ള രണ്ടു വരികളിലായി താഴെ കൊടുത്തിരിക്കുന്നു

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

ഇതിൽ അടങ്ങിയിരിക്കുന്ന അക്ഷരങ്ങളുടെ ക്രമം ഉപയോഗിച്ചാണ് പ്രശ്നങ്ങൾക്ക് പരിഹാരങ്ങൾ കണ്ടെത്തേണ്ടത്. പ്രശ്നങ്ങളുടെ മാതൃകകൾ താഴെ കൊടുത്തിരിക്കുന്നു.

M	M	M
M	M	M
M	M	?

ഉദാഹരങ്ങൾ

L M N O

4 ഉത്തരങ്ങൾ വലരുഭാഗത്ത് തന്നിരിക്കുന്നു. ഇവയിൽ ഏതുത്തരം തെറ്റാണെന്ന് ചിത്രത്തിൽ ചോദ്യചിഹ്നം കാണിച്ചിരിക്കുന്ന ചതുരം പൂർത്തിയാക്കാം?

ഒന്നാമത്തെ രണ്ടു വരികളിലും കൊടുത്തിരിക്കുന്ന അക്ഷരങ്ങൾ എന്തുനിയമം പാലിക്കുന്നു എന്നു മനസ്സിലാക്കി ഇവ മൂന്നാമത്തെ വരിയിലും ബാധകമാക്കുമ്പോൾ ചോദ്യചിഹ്നം കൊടുത്തിട്ടുള്ള ചതുരത്തിൽ വരേണ്ട അക്ഷരം കണ്ടുപിടിക്കാം.

മരണാവൃദ്ധോഹരണം താഴെ കൊടുത്തിരിക്കുന്നു.

A	A	A
B	B	B
C	C	?

ഉത്തരങ്ങൾ

A B C D

മുകളിൽ തന്നിട്ടുള്ള 4 ഉത്തരങ്ങളിൽ നിങ്ങൾ ഏത് തിരഞ്ഞെടുക്കും? ശരിയായ ഉത്തരം C ആണ്. ഒന്നാമത്തെയും രണ്ടാമത്തെയും വരികളിൽ ഒരേ അക്ഷരം തന്നെ വരുന്നതുകൊണ്ട് മൂന്നാമത്തെ വരിയിലും C എന്ന അക്ഷരം കൊണ്ടു തന്നെ പൂരിപ്പിക്കേണ്ടതാണ്.

ഈ രൂപത്തിലുള്ള 30 പ്രശ്നങ്ങൾ തുടർന്നു തന്നിരിക്കുന്നു. ഏറ്റവും പുരുഷനായ സമയം കൊണ്ട് ഇവയ്ക്ക് ഉത്തരങ്ങൾ കാണേണ്ടതാണ്. സമയം 15 മിനിറ്റാണ്. ഉത്തരക്കടലാസിൽ ശരിയായ ഉത്തരത്തിനു മുകളിൽ ഗുണനചിഹ്നം കൊണ്ട് പൂരിപ്പിക്കുക.

ഒന്നാമത്തെയും രണ്ടാമത്തെയും വരികളിൽ മൂന്നാമത്തെ വരിയെ സംബന്ധി ക്കുന്ന നിയമം കണ്ടുപിടിച്ചതുപോലെ തന്നെ ഒന്നാമത്തെയും രണ്ടാമത്തെയും കോളങ്ങളിലെ നിയമം കണ്ടെത്തി മൂന്നാമത്തെ കോളത്തിലെ വിട്ടുപോയിട്ടുള്ള അക്ഷരം കണ്ടുപിടിക്കാൻ കഴിയും.

അദ്ധ്യായപകൻ പറയുമ്പോൾ മാത്രം ഉത്തരം കണ്ടുപിടിക്കാൻ തുടങ്ങുക.

41

3

1

C	C	C
D	D	D
E	E	?

2

P	R	T
P	R	T
P	R	?

3

A	P	A
A	P	A
A	P	?

4

C	C	C
O	O	O
C	C	?

5

C	D	F
D	F	C
F	C	? Q

6

O	P	Q
P	Q	O
Q	O	? Q

7

A	A	B
A	B	A
B	A	? A

8

F	H	F
H	F	F
F	F	? H

9

A	B	C
E	F	G
I	J	?

10

K	G	C
L	H	D
M	I	? ^E

11

Z	Y	X
W	V	U
T	S	?

12

L	H	D
K	G	C
J	F	?

13

AB	NO	CD
PQ	EF	RS
GH	TU	?

14

AN	DQ	GT
BO	ER	HU
CP	FS	?

15

BN	DP	FR
DP	FR	BN
FR	BN	?

16

AP	CT	ER
CR	EP	AT
ET	AR	?

17

A	B	C
AN	BO	CP
ANO	BOP	?

18

ABO	CDQ	EFS
BO	DQ	FS
O	Q	?

19

ABC	BCD	CDE
BBC	CCD	ADE
CBC	ACD	?

20

IMN	MNO	NOP
INN	MOO	NMP
ION	MMO	?

21

ABC	DBC	GBC
DEF	GEF	AEF
GHI	AHI	?

22

EXC	CBX	XBC
FXG	GFX	XFG
IXK	KJX	?

23

AXB	BC	CA
BC	CAA	AB
CA	AB	?

24

AAR	BP	CQ
BQ	CCR	AP
CF	AQ	?

25

BXX	AX	AY
AY	BYY	AX
AY	AX	?

26

AOB	BOA	AB
FOE	EF	EOF
IJ	IOJ	?

27

AAB	A	AB
BC	BBC	B
C	CA	?

28

AX	YD	CZ
YD	EZ	XF
GZ	XH	?

29

AB CD	CA DB	DC BA
BD AC	AB CD	CD DB
DC BA	BD AC	?

30

AB RC	BC BA	CA QB
BC PA	CA QB	AB RC
CA QB	AB RC	?

LETTER MATRIC TEST OF INTELLIGENCE RESPONSE SHEET

Name : Sex Male/Female School.....

SET - II

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

1	C	D	E	F
2	T	S	Q	U
3	P	A	B	Q
4	D	P	O	C
5	B	C	D	F
6	P	R	O	Q
7	B	A	C	D
8	G	F	E	H
9	K	H	C	A
10	B	J	E	K
11	V	R	T	X
12	G	L	D	B
13	VW	UW	IJ	EF
14	IV	IJ	GT	GV
15	CO	DP	CM	FR

16	BU	BS	CP	AP
17	DQ	CPC	C	CPQ
18	S	R	O	GT
19	BDC	BDE	CDE	BEF
20	NMO	ONQ	NNO	NNP
21	DHI	BIJ	BFG	GHI
22	YJK	LKX	XJK	XGH
23	BC	BXC	CA	AXB
24	AAR	BQ	BR	BBR
25	BXX	AY	BX	AYY
26	JOI	JOK	JI	AB
27	C	AB	CCA	AAB
28	AX	YG	YI	IY
29	CEBD	ABCD	DBEC	DCBA
30	DBEC	DCBA	CEBD	BCBA

45

Generalised Achievement Test in Malayalam for Secondary School Pupils of Kerala.

DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT

കേരളത്തിലെ സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾ മലയാള ഭാഷയിൽ നേടിയിട്ടുള്ള കഴിവുകൾ പരിശോധിക്കുന്നതിനുവേണ്ടി തയ്യാറാക്കിയിട്ടുള്ളതാണ് ഈ ടെസ്റ്റ്. വിവിധ ഭാഷാബോധന ലക്ഷ്യങ്ങൾ പരിശോധിക്കുന്നതിനുള്ള ചോദ്യങ്ങൾ ഇതിൽ ഉൾക്കൊള്ളിച്ചിരിക്കുന്നു. ഏതെങ്കിലും പാഠപുസ്തകത്തെ അടിസ്ഥാനപ്പെടുത്തിയുള്ളതല്ല ഇതിലെ ചോദ്യങ്ങൾ. ചോദ്യങ്ങളെ സംബന്ധിച്ചുള്ള നിർദ്ദേശങ്ങൾ ഉത്തരം എഴുതിത്തുടങ്ങുന്നതിനു മുമ്പ് ശ്രദ്ധാപൂർവ്വം വായിച്ചുനോക്കേണ്ടതാണ്. നിർദ്ദേശിച്ച് സമയത്തിനുള്ളിൽ ഉത്തരം എഴുതിത്തീർക്കണം. അദ്ധ്യാപകൻ പറഞ്ഞതിനുശേഷം മാത്രം എഴുതിത്തുടങ്ങുകയും ഏറ്റവും വേഗത്തിൽ, ഭംഗിയായി എഴുതിത്തീർക്കാൻ ശ്രമിക്കുകയും ചെയ്യുക. ചോദ്യക്കടലാസിൽ എന്തെങ്കിലും എഴുതുകയോ അടയാളപ്പെടുത്തുകയോ ചെയ്യരുത്. പ്രത്യേകം തന്നിട്ടുള്ള ഉത്തരക്കടലാസിൽ മാത്രം ഉത്തരം എഴുതുക.

സമയം: 1½ മണിക്കൂർ.

PART - A

സമയം: 15 മിന്

നിർദ്ദേശങ്ങൾ :

1 മുതൽ 35 വരെയുള്ള ചോദ്യങ്ങൾക്ക് a, b, c, d എന്ന് നാല് ഉത്തരങ്ങൾ കൊടുത്തിരിക്കുന്നു. ഓരോ ചോദ്യത്തിലും വ്യക്തമാക്കിയിരിക്കുന്ന പ്രത്യേക നിർദ്ദേശമനുസരിച്ച് ശരിയായ ഉത്തരത്തെ സൂചിപ്പിക്കുന്ന അക്ഷരത്തിനുചുറ്റും തന്നിട്ടുള്ള ഉത്തരക്കടലാസിൽ ഒരു വൃത്തം വരയ്ക്കുക.

ഉദാഹരണം: 'കമലം' എന്ന പദത്തിന്റെ അർത്ഥം ഏത് ?

- a ചെമ്പകം b താമര c ആമ്പൽ d അശോകം

ഇവിടെ b ആണ് ശരിയായ ഉത്തരം. അതിനാൽ b യ്ക്ക് ചുറ്റും വൃത്തം വരച്ചിരിക്കുന്നു.

a, (b), c, d

1 മുതൽ 2 വരെയുള്ള പദങ്ങളുടെ ശരിയായ അർത്ഥങ്ങൾ ഏവ ?

- 1 ചൊടി a നെററി b ചുണ്ട് c മുഖം d ചെവി

- 2 നീഡം a ഗൃഹ b ആകാശം c വീട് d കൂട്

3 മുതൽ 4 വരെയുള്ള പദങ്ങളുടെ ശരിയായ രൂപങ്ങൾ ഏവ ?

- 3 a വ്യവസ്ഥ b വിവസ്ഥ c വ്യവസ്ത d വിവസ്ത

- 4 a പ്രവർത്തി b പ്രവിർത്തി c പ്രവൃത്തി d പ്രവൃർത്തി

5 'പയസ്സ്' എന്ന പദത്തിന്റെ ശരിയായ നാനാർത്ഥങ്ങൾ ഏതു ഗ്രൂപ്പിലാണുള്ളത് ?

- a ശർക്കര-ജലം b ജലം-നെയ്യ് c ജലം-പാൽ d പാൽ-എണ്ണ

6 'പക്ഷി' എന്ന പദത്തിന്റെ പര്യായമല്ലാത്ത പദം ഏത് ?

- a പാവ b പതംഗം c പരവ d നീഡജം

7 മുതൽ 8 വരെയുള്ള പദങ്ങളുടെ വിപരീത പദങ്ങൾ ഏവ ?

- 7 ദൃഢം a സുദൃഢം b ശിഥിലം c സ്ഥൂലം d ബലം

- 8 സ്വസ്ഥം a അസ്വാസ്ഥ്യം b അസ്വസ്ഥത c അസ്വസ്ഥം d മദം

9 'പരിചാരകൻ' എന്ന പദത്തിന്റെ ശരിയായ എതിർലിംഗം ഏത് ?

- a പരിചാരികി b പരിചാരിക c പരിചാരകി d പരിചാരി

10 മുതൽ 11 വരെയുള്ള കൃതികളുടെ കർത്താക്കൾ ആരെല്ലാം ?

10 ഒരു ദേശത്തിന്റെ കഥ

- a തക്ഷി b S. K. പൊറക്കാട് c കേശവദേവ് d വിലാസിനി

11 നാട്യശാസ്ത്രം

- a കാളിദാസൻ b ഭരതമുനി c ആനന്ദവർദ്ധനൻ d വ്യാസൻ

12 'എട്ടുകാലിമമ്മുണ്ണത്ത്' എന്ന കഥാപാത്രം ആരുടെ സൃഷ്ടിയാണ് ?

- a പുനത്തിൽ കുഞ്ഞബ്ദുള്ള b എൻ. പി. മുഹമ്മദ് c വൈക്കം മുഹമ്മദ്ബഷീർ d മൊയ്തു പടിയത്ത്

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13 മുതൽ 14 വരെയുള്ള പഴഞ്ചൊല്ലുകളുടെ ശരിയായ അർത്ഥങ്ങൾ ഏവ ?

13 'മടിയൻ മലചുമക്കും'

- a മടിയുള്ളവൻ മല ചുമക്കാൻ ശക്തനാണ്
- b മടിയുള്ളവന് മല ചുമക്കാൻ ശക്തിയില്ല
- c മടിയുള്ളവൻ ഓരോ സമയത്തും ചെറുപ്പം ജോലികൾ അപ്പപ്പോൾ ചെയ്യാതെ ഒന്നിച്ചു ചെയ്യാൻ ശ്രമിക്കുന്നു
- d മടിയുള്ളവൻ എല്ലാ ജോലിയും ഒന്നിച്ചുചെയ്യുന്നു

14 'ഏട്ടിലെ പശു പുല്ലു തിന്നില്ല'

- a പുസ്തകത്തിൽ കാണുന്ന എല്ലാ സിദ്ധാന്തങ്ങളും പ്രായോഗികമല്ല
- b പ്രായോഗികമായ കാര്യങ്ങളാണ് എല്ലാ പുസ്തകങ്ങളിലുമുള്ളത്
- c പ്രായോഗികമായ കാര്യങ്ങളേ പുസ്തകത്തിൽ കാണാവൂ
- d പുസ്തകത്തിൽ കാണുന്ന കാര്യങ്ങളെല്ലാം പ്രായോഗിച്ചുനോക്കണം.

15 മുതൽ 16 വരെയുള്ള കവിതാഭാഗങ്ങൾ ഏതെല്ലാം കൃതികളിലേതാണ്

15 "പച്ചോടമില്ലാഞ്ഞിട്ടുൾച്ചീടുമുണ്ടായി
പിച്ചയായുളളോന്നിക്കാല ലീല"

- a കണ്ണശരാചാര്യൻ
- b കൃഷ്ണഗോപാലൻ
- c രാമചരിതം
- d ശ്രീകൃഷ്ണചരിതം

16 "നോക്കടൊ നമ്മുടെ മാർഗ്ഗേകിടക്കുന്ന
മർക്കടൊ നീയങ്ങു മാറിക്കിടാശൊ"

- a കിരാതം തുള്ളൽ
- b കല്യാണസൗഗന്ധികം തുള്ളൽ
- c സ്യമന്തകം തുള്ളൽ
- d ലോഷയാത്ര

(17—20) കൃതികൾ ഏതതു സാഹിത്യ ശാഖയിൽപെടുന്നു ?

17 ഭാഷാനൈഷധം

- a രൂപകം
- b ചമ്പു
- c നാടകം
- d ആഖ്യാനിക

18 നളചരിതം

- a നാടകം
- b ആട്ടക്കഥ
- c കഥാകാവ്യം
- d മഹാകാവ്യം

19 മാർത്താണ്ഡവർമ്മ

- a നിരൂപണം
- b ഖണ്ഡകാവ്യം
- c നാടകം
- d ചരിത്രാഖ്യാനിക

20 ഉമാകേരളം

- a സന്ദേശകാവ്യം
- b ഖണ്ഡകാവ്യം
- c മഹാകാവ്യം
- d ലഘുകാവ്യം

21 ജ്ഞാനപീഠ സമ്മാനം ആദ്യമായി നേടിയ സാഹിത്യകാരൻ ആരാണ് ?

- a V. S. ഖണ്ഡേക്കർ
- b G. ശങ്കരക്കുറുപ്പ്
- c S. K. പൊററക്കാട്
- d തങ്കഴി

22 'രാമന്റെ' എന്നനാമം ഏതു വികേതിയിലാണ് പ്രയോഗിച്ചിരിക്കുന്നത് ?

- a ആരാധിക
- b സംയോജിക
- c സംബന്ധിക
- d പ്രയോജിക

23 'ദാശരഥി' എന്ന പദം ഏതു വ്യാകരണ വിഭാഗത്തിലാണ് ഉൾപ്പെടുന്നത് ?

- a കൃത്തം
- b തലിതം
- c ക്രിയ
- d ക്രിയാനാമം

24 'ഉത്തമസാഹിത്യം' എന്ന പദത്തിലെ സമാസം ഏതു ?

- a സംബന്ധികാതത്പുരുഷൻ
- b ആരാധികാതത്പുരുഷൻ
- c അവ്യയീഭാവൻ
- d കർമ്മധാരയൻ

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- 25 'വാഴപ്പഴം' എന്ന പദത്തിലെ സന്ധി ഏത് ?
a ദ്വിതം b ലോപം c ആദേശം d ആഗമം
- 26 'നമസ്തേ' എന്ന പദം പിരിച്ചെഴുതുന്നതെങ്ങനെ ?
a നമ+തേ b നമഃ+തേ c നമ+സ്തേ d നമ+അസ്തേ
- 27 താഴെ പറയുന്ന കാലപ്രത്യയങ്ങളിൽ ഭാവികാലപ്രത്യയം ഏത് ?
a തു b ഇ c ഉം d ഉന്നു
- 28 മലയാളം ഏതു ഭാഷാഗോത്രത്തിൽപ്പെടുന്നു ?
a സെമിറ്റിക് b ദ്രാവിഡം
c ഇൻഡോയൂറോപ്യൻ d ഹാമിറ്റിക്
- 29 'ക' എന്ന അക്ഷരം ഏതു സ്ഥാനവിഭാഗത്തിൽപ്പെടുന്നു ?
a കണ്ഠ്യം b താലവ്യം c ഓഷ്ഠ്യം d വർത്സ്യം
- 30 മലയാള വാക്യത്തിലെ പദഘടനാരീതി ഏത് ?
a കർമ്മം, ക്രിയ, കർത്താവ് b കർത്താവ്, കർമ്മം, ക്രിയ
c ക്രിയ, കർത്താവ്, കർമ്മം d കർമ്മം, കർത്താവ്, ക്രിയ
- 31 ഉമീക്കേരി (ഉമിക്കേരി) എന്ന പദം ഏതു ദേശ്യഭേദമാണ് ?
a കൊച്ചി b കോട്ടയം c തിരുവനന്തപുരം d കൊല്ലം
- 32 'അപേക്ഷിച്ചുകൊള്ളുന്നു' എന്ന ക്രിയയിൽ അനുപ്രയോഗം ഏത് ?
a അപേക്ഷ b അപേക്ഷിക്കുക c അപേക്ഷിച്ചു d കൊള്ളുന്നു
- 33 മുതൽ 35 വരെയുള്ള പദങ്ങളുടെ ശരിയായ വിഗ്രഹവാക്യങ്ങൾ ഏവ ?
- 33 ഗേവച്ചിന്ത a ഗേവാൻറെ ചിന്ത b ഗേവാന്റും ചിന്തയും
c ഗേവാനെക്കുറിച്ചുള്ള ചിന്ത d ഗേവാനോടുള്ള ചിന്ത
- 34 ചോദ്യശരം a ചോദ്യവും ശരവും b ചോദ്യമാകുന്ന ശരം
c ചോദ്യത്തിൻറെ ശരം d ചോദ്യം പോലുള്ള ശരം
- 35 തീപ്പെട്ടി a തീകൊണ്ടുള്ളപ്പെട്ടി b തീയുണ്ടാക്കാനുള്ളപ്പെട്ടി
c തീയെരികാനുള്ളപ്പെട്ടി d തീയാകുന്നപ്പെട്ടി

PART - B

സമയം: 1½ മണിക്കൂർ.

36 മുതൽ 37 വരെ പദങ്ങളുടെ അർത്ഥവ്യത്യാസം എഴുതുക.

36 അർത്ഥം—അർദ്ധം 37 നാഗം—നാകം

38 താഴെ കാണുന്ന വാക്യത്തെ ആശയവ്യത്യാസമില്ലാതെ നാലു പൂർണ്ണവാക്യങ്ങളായി പിരിച്ചെഴുതുക.

“നവശിലായുഗത്തിലെ ഒരു മിനുസപ്പെടുത്തിയ കല്ലുളി ഏടയ്ക്കൽ ഗൃഹകളിൽനിന്ന് മി. ഫാസ്റ്ററു് കണ്ടെത്തിയിട്ടുള്ളതിനാലും ഇത്തരം ഉളികൾ കൊണ്ടാണ് ഏടയ്ക്കൽ ഗൃഹയിലെ ചിത്രങ്ങൾ കൊത്തിയിരിക്കുന്നതെന്നു വിചാരിക്കേണ്ടിയിരിക്കുന്നതിനാലും മദ്ധ്യഇന്ത്യയിലുള്ള ഛോട്ടാ നാഗപ്പുരിലെ നാഗിലയ്ക്കടുത്തുള്ള കൊത്തുചിത്രങ്ങളോട് ഇവയ്ക്കു് സാമ്യമുള്ളതിനാലും ഏടയ്ക്കൽ ഗൃഹയിലെ ചിത്രങ്ങൾ നവശിലായുഗകാലത്ത് ജനിച്ചിരിക്കുമെന്ന് മിസ്റ്റർ. പഞ്ചാനനമിത്രൻ അഭിപ്രായപ്പെടുന്നു”.

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39 താഴെ കാണുന്ന മൂന്നു വാക്യങ്ങൾ ഒരു വാക്യത്തിന്റെ തന്നെ ഭാഗങ്ങളാണ്. ഈ വാക്യങ്ങളെ ആശയ വ്യത്യാസം കൂടാതെ ഒറ്റവാക്യമാക്കുക.

“ജി. ശങ്കരക്കുറുപ്പ്, വള്ളത്തോളിന്റെ സാഹിത്യമണ്ഡലികളിലെ മനോഹരങ്ങളായ ഭാവഗീതയുടെ ചുവടുപിടിച്ചുകൊണ്ട് കവിത എഴുതിപ്പോന്നു. അദ്ദേഹം ടാഗോറിന്റെ സ്വാധീനതയ്ക്കു വശം-വദനായി മിസ്റ്റിക് കവിതകളിലേക്കും സിംബോളിക് കവിതകളിലേക്കും നീങ്ങി. അത് മലയാള സാഹിത്യത്തിലെ ഒരു പ്രധാന സംഭവം തന്നെ.”

40 താഴെ കാണുന്ന വാക്യത്തിലെ നിഷേധം അർത്ഥവ്യത്യാസം കൂടാതെ മാറ്റുക.

“വിദ്യാലയ ജീവനക്കാരിൽ അധ്യാപകരല്ലാത്തവർ കുറവാണ്.”

41 മുതൽ 44 വരെയുള്ള പദങ്ങളെ റെറ്റാപ്പോസിറ്റീവ് ചെയ്യുക.

41 സമമായ അർത്ഥം. 42 രണ്ടുപേർ 43 ഫലവും മൂലവും 44 അണുകൊണ്ടുള്ള ആയുധം

45 മുതൽ 46 വരെയുള്ള ശൈലികൾ സ്വന്തം വാക്യത്തിൽ പ്രയോഗിക്കുക.

45 കൈവെടിയുക 46 സാർവ്വജനീനം

47 താഴെ കാണുന്ന പദ്യം പരാവർത്തനം ചെയ്യുക

“പൂക്കുന്നിതാമുല്ല, പൂക്കുന്നിലഞ്ഞി
പൂക്കുന്നു തേന്മാവു, പൂക്കുന്നശോകം
വായ്ക്കുന്നു, വേലിക്കു വർണ്ണങ്ങൾ പൂവാൽ
ചോക്കുന്നു, കാടന്തിമേലങ്ങൾപോലെ”

താഴെ കൊടുത്തിട്ടുള്ള ഗദ്യഭാഗം വായിച്ച് മനസ്സിലാക്കി 48 മുതൽ 51 വരെയുള്ള ചോദ്യങ്ങൾക്ക് സ്വന്തം വാക്യത്തിൽ ഉത്തരമെഴുതുക.

“മനുഷ്യൻ സങ്കുചിതത്വങ്ങളുടെ വലയങ്ങളെല്ലാം ഭേദിച്ച് വിശ്വത്തോളം വളരുന്ന കാഴ്ചയാണ് നാം എല്ലാ രംഗത്തും കണ്ടുവരുന്നത്. വ്യക്തിപരതയിൽ നിന്ന് സമൂഹപരതയിലേക്കും നാഷണലിസത്തിൽ നിന്നും ഇന്റർനാഷണലിസത്തിലേക്കും സാർവ്വലോകിക ചിന്താഗതിയിലേക്കും അവന്റെ ചിന്താഗതി നീങ്ങിക്കൊണ്ടിരിക്കുകയാണ്. ഒരൊറ്റ വ്യക്തിയുടെ വളർച്ചയിലൂടെ ഒന്നും നേടാനാവില്ലെന്ന് ബോധ്യപ്പെട്ട മനുഷ്യൻ സമൂഹത്തിന്റെ ഉയർച്ചയ്ക്കു പരിശ്രമിക്കാൻ തുടങ്ങി. അന്യനായ നാഷണലിസം ലോകമഹായുദ്ധങ്ങളുടെ എതിർപ്പിന്മേലേക്കു മനുഷ്യരാശിയെ വലിച്ചിടുകയല്ല ഇന്റർനാഷണലിസത്തിലേക്ക് അവൻ എത്തിച്ചേരുകയുണ്ടായി. സങ്കുചിതമായ നാഷണലിസം, മനുഷ്യനെ കല്ലറകളിലിട്ടു പൂട്ടാനും തമ്മിൽ തല്ലിക്കാനും മാത്രമേ ഉതകൂ എന്നു ചിന്തിക്കാൻ തുടങ്ങിയ മനുഷ്യൻ ബോധ്യമായി. അതിനെത്തുടർന്ന് ലോകത്തെ ഒന്നായി കാണാനും ലോകത്തിലെ വിവിധ ഭാഗങ്ങളിലുള്ള മനുഷ്യരാശിയെ സഹോദരന്മാരെപ്പോലെ പരിഗണിക്കാനും അവരുടെ പ്രശ്നങ്ങൾ പോലെ സമീപിക്കാനും ഉള്ള മനോഭാവം ഇന്ന് എവിടെയും കണ്ടുതുടങ്ങിയിട്ടുണ്ട്. ഈ മനോഭാവത്തിന്റെ പ്രതീകമാണ് ഐക്യരാഷ്ട്രസഭ.”

48 മനുഷ്യൻ സമൂഹത്തിന്റെ ഉയർച്ചയ്ക്കു പരിശ്രമിക്കാൻ തുടങ്ങിയതെന്തുകൊണ്ട് ?

49 എന്തിന്റെ പ്രതീകമാണ് ഐക്യരാഷ്ട്രസഭ ?

50 നാഷണലിസത്തിന്റെ ദോഷമെന്താണ് ?

51 മനുഷ്യൻ ഇന്റർനാഷണലിസത്തിൽ എത്തിച്ചേർന്നതെപ്പോൾ ?

താഴെ കാണുന്ന പദ്യഭാഗം വായിച്ചു മനസ്സിലാക്കി 52 മുതൽ 56 വരെ ചോദ്യങ്ങൾക്ക് സ്വന്തം വാക്യത്തിൽ ഉത്തരമെഴുതുക.

“ആശ്രമാങ്കണങ്ങളിലഹിംസാഹോമത്തിനെ-
യാത്രയിച്ചയിർക്കൊണ്ട മോചന സത്യാഗ്രഹം
തുംഗനൈതികധർമ്മനിർമ്മലം നിരായുധാ-
സംഗരം പോകെക്കലങ്ങുന്നതു കാൺകേ
നെഞ്ചകം പിളർന്നുപോയ് രാഷ്ട്രതാതന്തും-അതേ
വഞ്ചനതൂടരുന്നൂ. കണ്ണുപിമ്മുന്നൂ നമ്മൾ
കാണികൾ വിദേശികൾ തുരന്നുള്ള വീണ
തോണിയായ് രാജ്യം നമ്മളതിന്മേലുറങ്ങുമ്പോൾ
തീവ്രവാദികൾ സ്വന്തം നാട്ടുകാരിരമ്പുന്ന
തീരങ്ങൾ തകർക്കുവാൻ ചൂഴ്ചിയായ് കൊടുക്കാറായ്”

- 52 സത്യാഗ്രഹം ഏതിനെ ആശ്രയിച്ചാണ് ജീവൻ വച്ചത് ?
- 53 രാഷ്ട്രത്തെ വിദേശികൾ എങ്ങനെയാക്കിത്തീർത്തു ?
- 54 സത്യാഗ്രഹം എങ്ങനെയുള്ള സംഗരമാണ് ?
- 55 രാഷ്ട്രപിതാവിന്റെ നെഞ്ചകം പിളർന്നതെപ്പോൾ ?
- 56 തീവ്രവാദികളെ എന്തൊക്കെയായിട്ടാണ് കവി കാണുന്നത് ?
- 57 തെറ്റുണ്ടെങ്കിൽ തിരുത്തുക.

“ചെമ്പകശ്ശേരി മണ്ഡലത്തിൽ മത്സരിക്കുന്ന സ്വതന്ത്ര സ്ഥാനാർത്ഥി പി. കെ. കുട്ടന് അരയാട അടയാളത്തിൽ വോട്ടു രേഖപ്പെടുത്തി വിജയിപ്പിക്കുക”

- 58 ആശയം വികസിപ്പിച്ചു ഒരു ഖണ്ഡിക എഴുതുക.
“ബന്ധുര കാഞ്ചനക്കൂട്ടിലാണെങ്കിലും
ബന്ധനം ബന്ധനം തന്നെപാരിൽ”

59 താഴെ കാണുന്നത് ഒരു കഥയിലെ ക്രമം തെറ്റിയ വാക്യങ്ങളാണ്. അവ ക്രമപ്പെടുത്തിയെഴുതുക.

ഇരുവരും തങ്ങളാണ് ഏറ്റവും ശക്തർ എന്നൊക്കെ വിളിച്ചുപറഞ്ഞു. കുറച്ചുദൂരം ചെന്നപ്പോൾ ഒരു സിംഹത്തിന്റെ പുറത്തുകയറിയിരുന്ന് അതിന്റെ കഴുത്തു ഞെരിക്കുന്ന ഒരു മനുഷ്യന്റെ പ്രതികരണം. സിംഹവും മനുഷ്യനും സംസാരിച്ചുകൊണ്ടു നടക്കുകയായിരുന്നു. സിംഹം പറഞ്ഞു “ഞങ്ങൾക്ക് കൊത്തുപണി അറിയാമായിരുന്നെങ്കിൽ മനുഷ്യന്റെ പുറത്ത് സിംഹം കയറിയിരുന്ന് കഴുത്തു കടിച്ചുകീറുന്ന പ്രതിമയായിരിക്കും അവിടെ ഉണ്ടാകുക. ഞങ്ങൾ മൃഗങ്ങൾക്കകളെ ആ വിഭാഗത്തിൽപ്പെടുത്തുക.” ഈ പ്രതിമ കണ്ടപ്പോൾ മനുഷ്യൻ പറഞ്ഞു. ആ “പ്രതിമ നോക്കൂ. ഞങ്ങൾ എത്ര ബലവാന്മാരാണെന്ന് അതിൽനിന്നും നിനക്ക് മനസ്സിലാക്കാം.”

- 60 നിങ്ങൾക്ക് ആസ്വാദ്യമായി തോന്നിയിട്ടുള്ള എട്ടുവരി കവിത എഴുതുക. കഴുതിയുടെ പേരും കർത്താവിന്റെ പേരും കൂടി രേഖപ്പെടുത്തുക.
- 61 സ്കൂൾ സാഹിത്യസമാജം ഉദ്ഘാടനയോഗത്തിൽ നിങ്ങൾ ചെയ്യുന്ന ഒരു പ്രസംഗം തയ്യാറാക്കുക.

അല്ലെങ്കിൽ

നിരക്ഷരതാനിർമ്മാർജ്ജനരതിനു വിദ്യാർത്ഥികൾക്കു ചെയ്യാവുന്ന സേവനങ്ങളെക്കുറിച്ച് ഒന്നരപുതിരിൽ കവിയാത്മ ഒരു ഉപന്യാസം തയ്യാറാക്കുക.

**Generalised Achievement Test in
Malayalam for Secondary School Pupils of Kerala.**
(Dept. of Education Calicut University)

Name.....

School.....

Standard.....

Div.....

Class No.....

Age.....

PART - A

- | | | | | | | | | | |
|-----|---|---|---|---|-----|---|---|---|---|
| 1) | a | b | c | d | 19) | a | b | c | d |
| 2) | a | b | c | d | 20) | a | b | c | d |
| 3) | a | b | c | d | 21) | a | b | c | d |
| 4) | a | b | c | d | 22) | a | b | c | d |
| 5) | a | b | c | d | 23) | a | b | c | d |
| 6) | a | b | c | d | 24) | a | b | c | d |
| 7) | a | b | c | d | 25) | a | b | c | d |
| 8) | a | b | c | d | 26) | a | b | c | d |
| 9) | a | b | c | d | 27) | a | b | c | d |
| 10) | a | b | c | d | 28) | a | b | c | d |
| 11) | a | b | c | d | 29) | a | b | c | d |
| 12) | a | b | c | d | 30) | a | b | c | d |
| 13) | a | b | c | d | 31) | a | b | c | d |
| 14) | a | b | c | d | 32) | a | b | c | d |
| 15) | a | b | c | d | 33) | a | b | c | d |
| 16) | a | b | c | d | 34) | a | b | c | d |
| 17) | a | b | c | d | 35) | a | b | c | d |
| 18) | a | b | c | d | | | | | |

VERBAL PART OF THE COMPREHENSIVE TEST OF CREATIVITY FOR SECONDARY ASCHOOL PUPILS

Mrs. V. Sumangala
Department of Education
University of Calicut (1987)

Total Time 35 mts.

നിർദ്ദേശങ്ങൾ

നിങ്ങളിലെ സർഗ്ഗചാസന (creativity) അളക്കുവാനുള്ള പ്രശ്നാവലിയാണിത്. ഇതിന്റെ ഉത്തരങ്ങളെ 'ശരി' അല്ലെങ്കിൽ 'തെറ്റ്' എന്ന് തരം തിരിക്കുന്നതല്ല. എല്ലാ ഉത്തരങ്ങളും 'ശരി' എന്ന് കണക്കാക്കുന്നതാണ്.

ചോദ്യത്തിന്റെ നിർദ്ദേശം മനസ്സിലാക്കി ഓരോന്നിനും അനുയോജ്യവും അസാധാരണവും ആയ ഉത്തരങ്ങൾ കഴിയുന്നിടത്തോളം എഴുതുക. ഓരോ ചോദ്യത്തിനും ഉത്തരം എഴുതുന്നതിനുള്ള മാതൃകകൾ ശ്രദ്ധിക്കുക.

ഓരോ ചോദ്യവും അദ്ധ്യായകൻ 'Start' എന്ന് പറയുമ്പോൾ മാത്രം എഴുതിത്തുടങ്ങുക. Stop എന്ന് പറയുമ്പോൾ അവസാനിപ്പിക്കുക.

SECTION - A

I ഏതാനും വാക്കുകളുടെ ആദ്യത്തെയും അവസാനത്തെയും അക്ഷരങ്ങൾ തന്നിരിക്കുന്നു. അവകിടയിൽ ഒന്നോ അതിലധികമോ അക്ഷരങ്ങൾ ചേർത്ത് തന്നിട്ടുള്ള സമയത്തിനുള്ളിൽ എഴുതാവുന്നിടത്തോളം വാക്കുകൾ എഴുതുക.

ഉദാ:- പ.....ക

- 1. പലക 6. പതറുക
2. പട്ടിക 7. പാടുക
3. പക 8. പരിഭവിക്കുക
4. പത്രിക 9. പകരുക
5. പടരുക etc.

- a) ക.....ക
b) മ.....ക

II താഴെയുള്ള രണ്ടു വാചകങ്ങളിൽ ഓരോ ഉപമ കൊടുത്തിരിക്കുന്നു. അനുയോജ്യമായ ഉപമ ചേർത്ത് വാചകം പൂർത്തിയാക്കുക. ഒരേ വാചകത്തിന് തന്നെ ഒന്നിലധികം ഉപമകൾ ചേർത്ത് വാചകം പൂർത്തിയാക്കാവുന്നതാണ്. Time 5 mts.

ഉദാ:- മനോഹരമായ റോസാപൂഷ്പത്തിന്

സുഗന്ധം എന്നപോലെ.....

- 1. വിദ്വാനു സത്സ്വഭാവം
2. സജ്ജനങ്ങൾക്ക് ധനം etc.
a) സമുദ്രത്തിന് ആഴം എന്ന പോലെ.....
b) വാക്കിൽ അക്ഷരങ്ങൾ എന്നപോലെ.....

III താഴെ 2 വിശേഷണങ്ങൾ തന്നിരിക്കുന്നു. ഓരോന്നിന്റെ വിഭാഗത്തിലും വരാവുന്നവ എത്രത്തോളം എഴുതാമോ അത്രയും എഴുതുക. Time 6 mts.

ഉദാ:- കഠിനം എന്ന് വിശേഷിപ്പിക്കാവുന്നവ.

- 1. വലുതും 5. ദീർഘയാത്ര
2. ദുർമുഖം 6. വരൾച്ച
3. ക്രോധം 7. വെള്ളപ്പൊക്കം
4. പരിഹാസം 8. ക്ഷാമം etc.

(മറുവശം)

- a) വെറുപ്പുണ്ടാക്കുന്നത് എന്ന് വിശേഷിപ്പിക്കാവുന്നവ
- b) കേഴ്വിക്ക് രസം എന്ന് വിശേഷിപ്പിക്കാവുന്നവ

IV തന്നിരിക്കുന്ന 2 വസ്തുക്കളുടെ സാധാരണവും അസാധാരണവും ആയ ഉപയോഗങ്ങൾ എഴുതാവുന്നിടത്തോളം എഴുതുക Time 6 mts.

ഉദാ:- ഇഷ്ടിക. (ചുട്ടുകട്ട)

1. കെട്ടിടം നിർമ്മിക്കാൻ
2. അടുപ്പ് കൂട്ടുന്നതിന്
3. പുന്തോട്ടത്തിൽ ചെടികൾക്ക് ചുറ്റും വരമ്പ് നിർമ്മിക്കാൻ
4. പൊടിച്ചു ചെടികൾ വളമായി ഉപയോഗിക്കാൻ
5. പൊടിച്ചു വെള്ളത്തിൽ കലർത്തി ചായമായി ഉപയോഗിക്കുന്നതിന്
6. മൃഗങ്ങളെ എറിയാൻ
7. Doorstop ആയി ഉപയോഗിക്കാൻ
8. Paper weight ആയി ഉപയോഗിക്കാൻ
9. Book case ഉണ്ടാക്കാൻ etc.

- a) News paper (വാർത്താപത്രം)
- b) Tyre (ടയർ)

V നിങ്ങളുടെ ചില നിത്യോപയോഗസാധനങ്ങളുടെ പേർ ചുവടെ ചേർക്കുന്നു. അവയെ ഇപ്പോഴത്തേതിനേക്കാൾ കൂടുതലായി എങ്ങനെ പരിഷ്കരിക്കാമെന്ന് നിർദ്ദേശിക്കുക. നിർദ്ദേശം പ്രായോഗികമാണോ അല്ലയോ എന്ന് നോക്കേണ്ടതില്ല Time 6 mts.

ഉദാ:- പേന

1. അക്ഷരങ്ങളുടെ കനം കൂട്ടുകയും കുറയ്ക്കുകയും ചെയ്യാവുന്നതും
2. മഷി തീരാറാകുമ്പോൾ Signal കാണിക്കുന്നവ
3. ആവശ്യമുള്ള സമയത്തുമാത്രം പുറത്തു വരുത്താവുന്ന നിബ് ഉള്ളവ.
4. ഒന്നിലധികം തരം മഷി നിറപ്പ് എഴുതാൻ കഴിയുന്നവ etc.

- a) Note Book
- b) School Bag

VI നടക്കാനിടയില്ലാത്ത സംഭവങ്ങൾ തന്നിരിക്കുന്നു. അവ സംഭവിച്ചാൽ അനന്തരഫലങ്ങൾ എന്തെല്ലാമെന്ന് സങ്കല്പിച്ചെഴുതുക. Time 6 mts

ഉദാ:- മരണം ഉണ്ടാകുന്നില്ല.

1. ജനപ്പെരുപ്പം ഉണ്ടാകും
2. അന്ധുവങ്ങൾ വർദ്ധിക്കും
3. പാർപ്പിടപ്രശ്നം രൂക്ഷമാകും.
4. ക്ഷാമം കഠിനമാകും
5. വെള്ളം ദുർലഭമാകും etc.

- a) കടൽ, കായൽ തുടങ്ങിയവ കരയാവുന്നു.
- b) ജലത്തിൽ നമുക്ക് ശ്വസിക്കാൻ കഴിയും.



KERALA SCALE OF ACHIEVEMENT MOTIVATION

Dr. A. SUKUMARAN NAIR

Professor & Head, Dept. of Education.

University of Calicut.

താഴെ കൊടുത്തിരിക്കുന്ന ഓരോ പ്രസ്താവനയും ശ്രദ്ധാപൂർവ്വം വായിച്ച് നിങ്ങളുടെ പ്രതികരണം ഉത്തര കടലാസിൽ 'Y', 'U', 'N' ഇവയുടെയിൽ കൊടുത്തിരിക്കുന്ന വൃത്തത്തിൽ ഏതെങ്കിലും 'X' ചിഹ്നം കൊണ്ട് രേഖപ്പെടുത്തുക. ഇവിടെ 'Y' അതെ (Yes) എന്നതിനെയും, 'U' തീർച്ചയില്ല (Undecided) എന്നതിനെയും, 'N' അല്ല (No) എന്നതിനെയുമാണ് സൂചിപ്പിക്കുന്നത്. എല്ലാ പ്രസ്താവനകൾക്കും ഉത്തരം അടയാളപ്പെടുത്താൻ പ്രത്യേകം ശ്രദ്ധിക്കുക.

- 1 വിദ്യാർത്ഥികളെ പഠനകാര്യങ്ങളിൽ കൂറാപ്പെടുത്തുന്ന അച്ഛനമ്മമാർ അവർതന്നെ വിദ്യാർത്ഥികൾ എന്ന നിലക്ക് ഒരു പരാജയമായിരുന്നു എന്ന കാര്യം മറക്കുന്നു.
- 2 ഇപ്പോൾ പഠിക്കുന്നതിലും നന്നായി പഠിക്കണമെന്ന് എന്റെ അച്ഛനോ അമ്മയോ എപ്പോഴും എന്റെ ഓർമ്മിപ്പിക്കുമ്പോൾ എന്റെ അർദ്ധം പ്രകടിപ്പിക്കണമെന്ന് തോന്നിപ്പോകാറുണ്ട്.
- 3 വില്പപ്പെട്ട യാതൊന്നും ചെയ്യാൻ കഴിയാത്ത ആളാണ് ഞാനെന്ന് എന്റെ കൂട്ടുകർ കരുതുന്നു.
- 4 ഞാനൊരു നല്ല വിദ്യാർത്ഥിയല്ലെന്ന് മറ്റുള്ളവരെ വിശ്വസിക്കുന്നവർക്കറിയില്ലെന്ന് എന്റെ പലപ്പോഴും അഭിനയിക്കാറുണ്ട്.
- 5 എന്തെങ്കിലും ഒരിക്കൽ ഒരു മഹാനായിത്തീരണമെന്ന് എനിക്ക് രഹസ്യമായ ഒരാഗ്രഹമുണ്ടെന്ന കാര്യം എന്റെ വിമർശിക്കുന്നവർക്ക് അറിയാൻ പാടില്ല.
- 6 മറ്റുള്ളവർ എന്തെങ്കിലും എന്തുപിചാരിച്ചാലും അത് എനിക്ക് ജീവിതത്തിൽ വിജയം വരിക്കുന്നതിന് തടസ്സമായിരിക്കുകയില്ല.
- 7 ഒരു മഹാനാകാൻ വിധിക്കപ്പെട്ടിട്ടുള്ള ഒരാളാണ് ഞാൻ എന്ന് എന്റെ വിമർശിക്കുന്ന മുതിർന്ന ആളുകളിൽ പലരും മനസ്സിലാക്കിയിട്ടില്ല.
- 8 ഉള്ള നേട്ടങ്ങൾക്കൊപ്പം തൃപ്തിപ്പെടുന്നവരെ എനിക്ക് ഇഷ്ടമല്ല.
- 9 എന്റെ മാതാപിതാക്കളുടെ സ്ഥിതിക്ക് അനുസരണമായി എന്റെ അഭിലാഷങ്ങൾ നിയന്ത്രിക്കണമെന്ന ഉപദേശത്തെ ഞാൻ ബഹുമാനിക്കുന്നു.
- 10 അസാധ്യമെന്ന് തോന്നുന്ന സാധ്യമാക്കുവാൻ വേണ്ടി പ്രവർത്തിക്കുന്നവരെ ഞാൻ ആദരിക്കുന്നു.
- 11 ഒരാൾക്ക് എല്ലായ്പ്പോഴും അയാൾ ആഗ്രഹിക്കുന്ന കാര്യങ്ങൾ കിട്ടുകയില്ലെന്ന് നാം അറിഞ്ഞിരിക്കേണ്ടതാണ്.
- 12 ഒരാൾക്ക് ഏത് ഉന്നത നിലയിലും എത്തിച്ചേരാമെന്ന് കാണിച്ചിട്ടുള്ള ആളുകളോട് എനിക്ക് ബഹുമാനമാണ്.
- 13 ഉന്നതസ്ഥാനങ്ങളിൽ എത്തിച്ചേരുന്നതിന് സഹായകമാകുമെന്ന് കരുതി പഠിക്കുന്നവർക്കിടയിൽ എന്റെ സഹായം ഉപയോഗിക്കുന്ന എന്റെ കൂട്ടുകാരോട് എനിക്ക് സഹതാപമാണുള്ളത്.
- 14 ഞാൻ ചെയ്യുന്നതെന്തും അതിലും നന്നായി മറ്റുള്ളവർക്ക് ചെയ്യാൻ കഴിയുമെന്ന് എനിക്ക് തോന്നാറുണ്ട്.
- 15 കിട്ടുന്ന സമയം മുഴുവനും ജോലിയെടുക്കാൻ കഴിയുന്ന കഠിന ആളുകൾ ഉണ്ടെന്നുള്ളത് ശരിയാണ്. നിർഭാഗ്യവശാൽ ഞാൻ അവരിൽ ഒരാളല്ല.
- 16 ഞാൻ ഏറെനേരം ഏതു കാര്യവും ഏറ്റെടുക്കുന്നതിൽ ചെയ്യാൻ തീർക്കുവാൻ ഞാൻ താല്പര്യപ്പെടുന്നു.
- 17 പ്രയാസങ്ങൾ അഭിമുഖീകരിക്കേണ്ടിവരുന്നവർക്ക് കണ്ടാൽ ഞാൻ തുടങ്ങിവെച്ച ജോലികൾ ഇടക്കുവെച്ച് ഉപേക്ഷിക്കാറുണ്ട്.
- 18 വളരെ പ്രയാസപ്പെട്ട കാര്യങ്ങൾ ചെയ്യേണ്ടിവരുമ്പോൾ എനിക്ക് പെട്ടെന്ന് ക്ഷീണം അനുഭവപ്പെടാറുണ്ട്.
- 19 പ്രയാസപ്പെട്ട കാര്യങ്ങൾ ചെയ്യുവാൻ ഇപ്പോഴുള്ളതിൽ കൂടുതൽ അവസരങ്ങൾ കിട്ടിയിരുന്നുവെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 20 മറ്റുള്ളവർക്ക് ചെയ്യുവാൻ പ്രയാസമുള്ള കാര്യങ്ങൾ ക്ലാസ്സിൽ വെച്ച് അധ്യാപകൻ എന്നോട് ചെയ്യുവാൻ ആവശ്യപ്പെടുമ്പോൾ എനിക്ക് സന്തോഷം തോന്നാറുണ്ട്.
- 21 പഠനസംബന്ധമായ കാര്യങ്ങൾക്ക് നേതൃത്വം കൊടുക്കേണ്ട കാര്യങ്ങളൊന്നും ഉണ്ടാകുമ്പോൾ, എന്റെ അധ്യാപകർ എല്ലായ്പ്പോഴും എന്തെന്തെന്ന് നേതാവായി തിരഞ്ഞെടുക്കാറുണ്ട്.
- 22 എന്റെ ആശയങ്ങൾ പ്രായോഗികമാണെന്ന് എന്റെ ക്ലാസ്സിലെ ആരും തന്നെ വിശ്വസിക്കുന്നില്ല.
- 23 ഏതെങ്കിലും കാര്യങ്ങൾ ഞാൻ ഏറ്റെടുത്താൽ ഏതു ത്യാഗവും സഹിച്ചു ഞാൻ അത് സമയത്ത് തീർക്കാറുണ്ട്.
- 24 കാര്യങ്ങൾ ശരിയായി ചെയ്തു തീർക്കുന്നതിനുള്ള ക്ഷമ ഇല്ലാത്തതിനാൽ ഇടയ്ക്കുവെച്ച് ഞാൻ അവ ഉപേക്ഷിക്കാറുണ്ട്.
- 25 ശരിയായി കാര്യങ്ങൾ ചെയ്തു തീർക്കുവാൻ കഴിയുകയില്ല എന്ന ഭീതി നിമിത്തം അപൂർവ്വമായി മാത്രമേ ഞാൻ കാര്യങ്ങൾ ഏറ്റെടുക്കാറുള്ളൂ.
- 26 എന്നോട് ചെയ്യുവാൻ ആവശ്യപ്പെടുന്ന കാര്യങ്ങൾ പലപ്പോഴും എന്റെ പരിമിതിയിൽ കവിഞ്ഞതാണെന്ന് എനിക്ക് തോന്നിയിട്ടുണ്ട്.

- 27 ഞാൻ ഏറ്റെടുക്കുന്ന കാര്യങ്ങൾ പരിപൂർണ്ണമായി പാർ ഞാൻ ചെയ്ത കാര്യങ്ങൾ വീണ്ടും വീണ്ടും തിരുത്തുന്നുണ്ട്.
- 28 ഞാൻ ചെയ്യുന്ന പല കാര്യങ്ങളിലും ഞാൻ അധിമതി കൊള്ളുന്നതുകൊണ്ട് അവ എന്റെ ഉടകൊര കാണിക്കാൻ ഞാൻ ഇടം കൊടുത്തു.
- 29 ഏതെങ്കിലും ജോലി ഏറ്റെടുക്കുവാൻ എന്തെങ്കിലും ആവശ്യപ്പെട്ടാൽ ഞാൻ ആ ആവശ്യം ശ്രദ്ധാർഹമായി ഉപയോഗപ്പെടുത്താറുണ്ട്.
- 30 പ്രവൃത്തികൾ പലതും വിവിധ സാഹചര്യങ്ങളായതിനാൽ എന്തെങ്കിലും ഏറ്റെടുക്കാൻ സമ്മതിക്കുന്നതിനുമുമ്പ് അതിനെക്കുറിച്ച് ആലോചിക്കാൻ കഠിന സമയം ഞാൻ ചിലവാക്കാറുണ്ട്.
- 31 ഒരു ജോലി ഞാൻ ഏറ്റെടുത്താൽ അത് സ്വയം ചെയ്യാൻ സാധിക്കുന്നതാണെന്ന് ഞാൻ സങ്കല്പിക്കാറുണ്ട്.
- 32 ഒരു കാര്യത്തിൽ തന്നെ അധികസമയം ശ്രദ്ധ ചെലുത്തുവാൻ സാധിക്കുന്നില്ലെന്ന് എന്റെ വലിയ ഒരു പലഹിതമാണ്.
- 33 രസകരങ്ങളായ പ്രവൃത്തികളിൽ ഏറ്റെടുക്കുന്ന സമയം ശ്രദ്ധ ചെലുത്തുവാൻ കഴിവുള്ള സ്റ്റേജിംഗ് ഞാൻ ആഘോഷിക്കാറുണ്ട്.
- 34 എനിക്ക് പ്രധാനമെന്നു തോന്നുന്ന കാര്യങ്ങളിൽ ശ്രദ്ധ ചെലുത്തുവാൻ എനിക്ക് കഴിയും.
- 35 കൂടുതൽ പണങ്ങൾ നേടുന്നതിനായി നിയമപരമായ ക്രമം അനുസരിച്ച് പ്രകടിപ്പിക്കുന്ന എന്റെ സ്റ്റേജിംഗ് ഞാൻ മനസ്സാക്കാൻ ആഗ്രഹിക്കാറുണ്ട്.
- 36 എന്റെ താൽപര്യങ്ങൾ സമയാസമയങ്ങളിൽ മാറിക്കൊണ്ടിരിക്കുന്നതിനാൽ ഞാൻ ചെയ്തുകൊണ്ടിരിക്കുന്ന കാര്യങ്ങൾ കൂടുതൽ പ്രധാനപ്പെട്ട മറ്റു കാര്യങ്ങൾക്കുപോലോ ഉപേക്ഷിക്കാറുണ്ട്.
- 37 ഒരു മഹാനായ തീരുമാനം ഞാൻ ആഗ്രഹിക്കുന്നുവെങ്കിലും, അതിനുവേണ്ടി മാനസികമായ കഴിവ് എന്തിനെക്കുറിച്ചു എന്തെങ്കിലും കാര്യങ്ങൾ പാടില്ല.
- 38 പഠന കാര്യങ്ങൾക്കോ സൂക്ഷ്മ സമയമായ ജോലികൾക്കുവേണ്ടി എന്റെ കഴിവിന്റെ പകുതി പോലും ഞാൻ ഉപയോഗിക്കുന്നില്ല.
- 39 കൂടുതൽ പ്രധാനപ്പെട്ട കാര്യങ്ങൾ ചെയ്യുവാൻ അവസരം ലഭിച്ചിരുന്നുവെങ്കിൽ എന്ന് ഞാൻ ആഗ്രഹിക്കുന്നു.
- 40 രസകരമായ കാര്യങ്ങൾ ഏറ്റെടുക്കുന്നതിനുവേണ്ടി രസകരങ്ങളായ കാര്യങ്ങൾ ഞാൻ തള്ളിക്കളയാറുണ്ട്.
- 41 എനിക്ക് ഏറ്റെടുക്കുന്നതിനുള്ളതാണെന്ന് തീരുമാനിക്കാൻ സാധിക്കാത്തതിനാൽ എനിക്ക് വിഷമവും മനഃപ്രയാസവും തോന്നാറുണ്ട്.
- 42 അംഗീകാരം കരസ്ഥമാക്കാൻ കഴിയാത്തതിനാൽ എനിക്കെപ്പോഴും ദുഃഖം തോന്നാറുണ്ട്.
- 43 എനിക്ക് എന്തെങ്കിലും തുടർച്ചപ്പെടുത്താൻ കഴിയുന്നുണ്ടോ എന്ന് തിരുത്തുന്നതിനായി എനിക്ക് നല്ലതീർച്ചയില്ല.
- 44 പരിഹാസം കണ്ടെത്തുവാനായി എന്തെങ്കിലും പ്രയാസമേറിയ പല പ്രശ്നങ്ങൾക്കും പരിഹാരം നിർദ്ദേശിക്കുവാൻ എന്റെ പരിചയക്കാരും, അറിയില്ലായ്മയും പ്രാപ്തമാണെന്നില്ലായെന്ന് എനിക്കെപ്പോഴും തോന്നിയിട്ടുണ്ട്.
- 45 റോളിംഗ് ഫീലിംഗിൽ ഉണ്ടാകുന്ന നേട്ടങ്ങൾ യഥാർത്ഥത്തിൽ അയാളുടെ കഴിവുകൾ ഉപയോഗിച്ച് അയാൾ സ്വയം തൃപ്തിപ്പെടുന്നതാണ്.
- 46 വിധിയിൽ എനിക്ക് വിശ്വാസമില്ല.
- 47 എനിക്ക് തീർച്ചയായും ഒരു നല്ല ജീവിതം നയിക്കണം.
- 48 ജീവിതത്തിൽ വിജയിച്ചിട്ടുള്ള ആളുകളിൽ എനിക്കറിയാവുന്ന എല്ലാവരും അനുകരിക്കാൻ ഞാൻ ശ്രമിക്കുന്നു.
- 49 ഒരു മഹാനായിത്തീരുവാൻ ഞാൻ തീരുമാനിച്ചിട്ടുണ്ട്.
- 50 വിജയത്തിൽ (മഹത്തമമായ) എന്തെങ്കിലും ചെയ്യുവാൻ കഴിഞ്ഞില്ലെങ്കിൽ ജീവിതംകൊണ്ട് പ്രയോജനമില്ല.
- 51 എനിക്ക് ധനവും അധികാരവും കൈവരിക്കണം.
- 52 എന്ന് ഒരു മഹാനായി മറ്റുള്ളവർ കരുതിയെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 53 ഞാൻ വളരെ അക്ഷമനാണ്; എന്റെ ജീവിതത്തിലെ ഓരോ മിനിറ്റും പ്രയോജനകരമായി ഉപയോഗിക്കേണ്ടതാണെന്ന് എനിക്ക് തോന്നുന്നു.
- 54 സമയം വളരെ സാഹചര്യത്തിൽ ഇഴഞ്ഞുനീങ്ങുന്നതായി എനിക്ക് കൂടെക്കൂടെ തോന്നുന്നു.
- 55 അതുതന്നെ സംഭവിക്കുമെന്ന് എനിക്ക് വിശ്വാസമില്ല; എല്ലാ മഹാനാടും ജീവിതത്തിൽ ഉന്നതസ്ഥാനം നേടുന്നതിനുവേണ്ടി കഠിനപ്രയത്നം ചെയ്യുകയും, പ്രതിസന്ധിക്കെതിരെ പോരാടുകയും ചെയ്തിട്ടുള്ളവരാണ്.
- 56 എനിക്ക് ജോലിത്തീരുമാനങ്ങൾ കഠിന സമയം കിട്ടിയിരുന്നെങ്കിൽ അതിനെ പ്രയോജനകരമായ എന്തെങ്കിലും കഴിവുകൾ വികസിപ്പിച്ചെടുക്കുന്നതിന് ഞാൻ ഉപയോഗിക്കുമായിരുന്നു.
- 57 കഠിനപ്രയത്നം, സുഖലോലുപത ഇല്ലാതെ എന്തെങ്കിലും ഒന്ന് തെരഞ്ഞെടുക്കുവാൻ എന്തോട് ആവശ്യപ്പെട്ടാൽ ഞാൻ തീർച്ചയായും തിരുമാനമെടുക്കുന്നതായിരിക്കും. തെരഞ്ഞെടുക്കുക.
- 58 അലസനായി ജീവിക്കുവാനാഗ്രഹിക്കുന്നയാൾക്ക് ജീവിതത്തിൽ നല്ല അനുഭവങ്ങൾ പ്രതീക്ഷിക്കുവാൻ അവകാശമില്ല.
- 59 ചെയ്യുന്ന വിദ്യാഭ്യാസം പൂർത്തിയാക്കുന്നതിനായി സമയം പെട്ടെന്നു പോയെങ്കിൽ എന്ന് ഞാൻ ആശിക്കുന്നു.
- 60 എന്റെ ആശയങ്ങൾ വളരെ പുതുതായതാണെന്ന് മറ്റുള്ളവരെ ബോധ്യപ്പെടുത്താൻ എനിക്ക് കഴിയുന്നതുകൊണ്ട് എന്റെ പദ്ധതികൾക്ക് പച്ചപ്പോഴും മറ്റുള്ളവരുടെ അംഗീകാരം ലഭിക്കാറുണ്ട്.

KERALA SCALE OF ACHIEVEMENT MOTIVATION RESPONSE SHEET

Name..... Sex Male/Female

Age.....

School.....

Std.....Div.....

	Y	U	N
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	0	0

	Y	U	N
21	0	0	0
22	0	0	0
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
32	0	0	0
33	0	0	0
34	0	0	0
35	0	0	0
36	0	0	0
37	0	0	0
38	0	0	0
39	0	0	0
40	0	0	0

	Y	U	N
41	0	0	0
42	0	0	0
43	0	0	0
44	0	0	0
45	0	0	0
46	0	0	0
47	0	0	0
48	0	0	0
49	0	0	0
50	0	0	0
51	0	0	0
52	0	0	0
53	0	0	0
54	0	0	0
55	0	0	0
56	0	0	0
57	0	0	0
58	0	0	0
59	0	0	0
60	0	0	0

UNIVERSITY OF CALICUT
DEPARTMENT OF EDUCATION
Scale of Attitude Towards Malayalam 1991.
(Dr. Mrs. V. Sumangala, Reader & E.S. Ramesan)

പ്രിയസുഹൃത്തേ,

മലയാളഭാഷയോടും അതിന്റെ പഠനത്തോടുമുള്ള നിങ്ങളുടെ മനോഭാവം മനസ്സിലാക്കുന്നതിനുള്ള 32 പ്രസ്താവനകളാണ് ഇതോടൊപ്പം തന്നിട്ടുള്ളത്. ഈ പ്രസ്താവനകൾ ഓരോന്നിനോടും നിങ്ങൾക്കുള്ള പ്രതികരണം പരിപൂർണ്ണമായി യോജിക്കുന്നു. (Strongly Agree) (S.A); യോജിക്കുന്നു (Agree) (A); നിശ്ചയമില്ല (Undecided) (U); വിയോജിക്കുന്നു (Disagree) (D.A); പരിപൂർണ്ണമായി വിയോജിക്കുന്നു (Strongly decided) (SDA) എന്നീ വിധത്തിലാണ് രേഖപ്പെടുത്തേണ്ടത്.

ഓരോ പ്രസ്താവനയും വായിച്ചശേഷം നിങ്ങളുടെ പ്രതികരണം എന്താണെന്ന് പ്രത്യേകം തന്നിട്ടുള്ള ഉത്തരക്കടലാസിൽ അടയാളപ്പെടുത്തുക.

അടയാളപ്പെടുത്തുന്ന വിധം

ഓരോ പ്രസ്താവനയേയും സൂചിപ്പിക്കുന്ന നമ്പരിനെതിരെ SA; A; U; DA; SDA; എന്നിങ്ങനെ ലഘുവൃത്തങ്ങൾ ഉത്തരക്കടലാസിൽ കൊടുത്തിട്ടുണ്ട്.

പരിപൂർണ്ണമായി യോജിക്കുന്ന പ്രസ്താവനയുടെ നമ്പരിനെതിരെ ശക്തിയായി യോജിക്കുന്നു; SA എന്ന വൃത്തത്തിലും യോജിക്കുന്നവയുടെ നേരെ യോജിക്കുന്നു A എന്ന വൃത്തത്തിലും പ്രത്യേകം അഭിപ്രായമില്ലെങ്കിൽ (നിഷ്പക്ഷത പാലിക്കുന്നുവെങ്കിൽ) അഭിപ്രായമില്ല U എന്ന വൃത്തത്തിലും വിയോജിക്കുന്നു എങ്കിൽ വിയോജിക്കുന്നു DA എന്ന വൃത്തത്തിലും ശക്തിയായി വിയോജിക്കുന്നുവെങ്കിൽ ശക്തിയായി വിയോജിക്കുന്നു. SDA എന്ന വൃത്തത്തിലും X മാർക്കു കൊണ്ട് അടയാളപ്പെടുത്തുക. ഓരോ പ്രസ്താവനക്കും എതിരെ അഭിപ്രായം മാത്രം രേഖപ്പെടുത്തിയാൽ മതി എന്ന കാര്യം പ്രത്യേകം ശ്രദ്ധിക്കുക.

ദരിക്കൽ അടയാളപ്പെടുത്തിയാൽ അത് ശരിയല്ല എന്ന തോന്നി വീണ്ടും അടയാളപ്പെടുത്തണമെങ്കിൽ ആദ്യം 'X' അടയാളമിട്ട വൃത്തത്തിനെ ചതൂരംകൊണ്ട് വലയം ചെയ്തശേഷം ശരിവ്കുള്ളവൃത്തത്തിൽ വീണ്ടും 'X' അടയാളമിടുക.

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പ്രസ്താവനകൾ

1. മലയാളം പഠിക്കുന്നതിനേക്കാൾ ഞാനിഷ്ടപ്പെടുന്നത് ഇംഗ്ലീഷ്ഭാഷ പഠിക്കുവാനാണ്.
2. സ്വരമാധുര്യവും താളബോധവും ഇല്ലെങ്കിൽപോലും മലയാളകവിതകൾ പഠിക്കുക ആനന്ദകരമാണ്.
3. കഥകളും കവിതകളും മലയാളഭാഷയിലുള്ളവയാണ് എനിക്ക് ഏറ്റവും ഇഷ്ടം.
4. ആനുകാലികപ്രസിദ്ധീകരണങ്ങൾ, പത്രങ്ങൾ എന്നിവ വായിക്കുമ്പോൾപോലും മലയാളത്തിലുള്ളവയ്ക്കാണ് ഞാൻ മുൻതൂക്കം കൊടുക്കാറുള്ളത്.
5. നല്ല മലയാളകവിതകൾ സമാഹരിക്കുക എന്റെ വിശ്രമവേളയിലെ ഇഷ്ടവിനോദമാണ്.
6. മലയാളംക്ലാസ്സിലെ ചോദ്യാത്തരവേളകളിൽ ചോദ്യങ്ങൾ എന്നോടാകരുതേ എന്ന് ആശിക്കാറുണ്ട്.
7. ഒരു നല്ല മലയാളാധ്യാപകനാകുക എന്നതാണ് എന്റെ ആഗ്രഹം.
8. സ്കൂൾ വർഷാരംഭത്തിൽ പാഠപുസ്തകങ്ങൾ കിട്ടിയാൽ ആദ്യം വായിച്ചുനോക്കുന്നത് മലയാളപാഠപുസ്തകമാണ്.
9. മലയാളം ക്ലാസ്സിൽ അധ്യാപകൻ ചോദ്യങ്ങൾ ചോദിച്ചാൽ ഉത്തരം പറയേണ്ടത് എന്റെ ഉൗഴമാണെങ്കിൽ മാത്രമേ ഞാൻ അതേക്കുറിച്ച് ചിന്തിക്കാറുള്ളൂ.
10. മലയാളസാഹിത്യകാരന്മാരുടെ പ്രസംഗങ്ങൾ കേൾക്കുക എന്നത് സമയം വ്യഥാവിലാക്കുന്നതിന് തുല്യമാണ്.
11. മലയാളപ്രഭാഷണം കേൾക്കാൻ കിട്ടുന്ന ഒരവസരവും ഞാൻ പാഴാക്കാറില്ല.
12. പ്രഗൽഭമലയാള സാഹിത്യകാരന്മാരുടെ ജീവചരിത്രവും അവർ ഭാഷയ്ക്കു നൽകിയ സംഭാവനകളും അടങ്ങുന്ന ഉപന്യാസങ്ങൾ വിദ്യാർത്ഥികളെക്കൊണ്ട് തയ്യാറാക്കി ക്ലാസിൽ അവതരിപ്പിച്ചാൽ മലയാളഭാഷയോട് താൽപ്പര്യം വർദ്ധിപ്പിക്കാൻ കഴിയും.
13. മറ്റുഭാഷകളറിയാമെങ്കിലും മലയാളത്തിൽ സംസാരിക്കുവാനാണ് ഞാനിഷ്ടപ്പെടുന്നത്.
14. മലയാളംക്ലാസ്സിൽ ശ്രദ്ധിച്ചില്ലെങ്കിലും പരീത്ഷപാസാകുവാൻ കഴിയുമെന്നതുകൊണ്ട് ഞാൻ ശ്രദ്ധിക്കാറില്ല.
15. മലയാളികളായ സുഹൃത്തുക്കൾ അനവസരങ്ങളിൽ ഇംഗ്ലീഷ് സംസാരിക്കുമ്പോൾ എനിക്ക് അമർഷം തോന്നാറുണ്ട്.

- 16 മലയാളം സംസാരിക്കുന്നത് അനുസ്മിന് നിരക്കാത്തതാണ്.
- 17 കേരളസാംസ്കാരികപശ്ചാത്തലം അറിയാൻ മലയാളഭാഷാപഠനം ആവശ്യമാണ്.
- 18 മലയാളഭാഷാഗവേഷണത്തിനായി ചെലവു ചെയ്യുന്ന തുക രാജ്യത്തിന് തീമാനപ്പെടുന്നു.
- 19 മലയാളഭാഷാകൃഷ്ണകൾ വിരസങ്ങളാണ്.
- 20 കാര്യങ്ങൾ എളുപ്പത്തിൽ ഗ്രഹിക്കാൻ ഏറ്റവും നല്ലത് മലയാളഭാഷതന്നെയാണ്.
- 21 കുടുംബാംഗങ്ങൾക്കിടയിൽ ആശയവിനിമയത്തിന് ഉപയോഗിക്കാമെന്നല്ലാതെ അതിൽക്കവിഞ്ഞ പ്രാധാന്യം മലയാളഭാഷയ്ക്കു കൊടുക്കേണ്ടതില്ല.
- 22 മനസ്സ് വിഷമിച്ചിരിക്കുമ്പോൾ ഒരു നല്ല മലയാളകവിത കേൾക്കാൻ കഴിഞ്ഞെങ്കിൽ എന്ന് ആഗ്രഹിച്ചു പോകാറുണ്ട്.
- 23 ഇംഗ്ലീഷിൽ കത്തെഴുതിയാലേ ബന്ധുക്കളിൽനിന്നുപോലും അംഗീകാരം കിട്ടുകയുള്ളൂ.
- 24 മലയാളഭാഷാധ്യാപകനാണ് മലയാളത്തെ മടുപ്പിക്കുന്ന ഭാഷയാക്കുന്നത്.
- 25 മലയാളകവിതകൾ ഇന്നത്തെപ്പോലെ ചൊല്ലാൻ കഴിയുന്നവരോട് എനിക്ക് പ്രത്യേകം സ്നേഹം തോന്നാറുണ്ട്.
- 26 കേരളീയരായ നാം മലയാളഭാഷയെ അനാദരിക്കുന്നത് സ്വന്തം മാതാവിനെ അനാദരിക്കുന്നതുപോലെയാണ്.
- 27 പരീക്ഷ പാസ്സാകാൻവേണ്ടി റാത്രമാണ് ഞാൻ മലയാളപാഠങ്ങൾ പഠിക്കുന്നത്.
- 28 മലയാളം പഠിക്കുന്നതിനായി അധികസമയം ചെലവഴിക്കുന്നത് കൊണ്ടു മറ്റു വിഷയങ്ങൾ പഠിക്കാൻ വേണ്ടത്ര സമയം ലഭിക്കാറില്ല.
- 29 കുട്ടികളിൽ ആത്മീയവും കലാപരവും ചൈതന്യകരമായ നല്ല വശങ്ങൾ വളർത്തിയെടുക്കാൻ കെലിപ്പുള്ളിപ്പാട്ട് അത്യന്താപേക്ഷിതമാണ്.
- 30 മലയാളാധ്യാപകർക്കാണ് കുട്ടികളുടെ വ്യക്തിപരമായ എല്ലാ നല്ല വികസനത്തിനും സാധിക്കുക.
- 31 കേൾക്കാനോ വായിക്കാനോ ഒട്ടും ഇഷ്ടപ്പെടാത്ത ഭാഷയാണ് മലയാളം.
- 32 സമൂഹത്തിൽ മാനുഷ വേണമെങ്കിൽ ഇംഗ്ലീഷ് പഠനത്തിന് പ്രാധാന്യം നല്കണം.

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UNIVERSITY OF CALICUT
DEPARTMENT OF EDUCATION

SCALE OF ATTITUDE TOWARDS MALAYALAM (1991)

Dr.(Mrs.) V. Sumangala, Reader & E.S. Ramesan

Instructions:

Thirty two statements are given to you to know your attitude towards Malayalam. Five kinds of responses can be given to each statement as A –Strongly Agree, B - Agree, C - Undecided, D – Disagree, and E – Strongly disagree.

Read each statement and mark your response by putting an X mark in any one of the five circles labelled SA, A, U, DA and SDA in the answer sheet given to you.

For example: If you Strongly Agree with a statement, put 'x' mark in the circle for SA, if you Agree, mark under A, if you are Undecided mark U, for Disagreement mark D, and for Strong Disagreement mark SDA.

If you feel that the first marked response is to be changed put square around the marked response and then put 'X' mark in the circular which you newly prefer.

1. I prefer to study English language than Malayalam.
2. Even though there is no rhythm and music, it is a pleasure to study malayalam poems.
3. I like very much to read Malayalam stories and poems.
4. Even in reading dailies and weeklies, my preference is to Malayalam.
5. My favourite hobby is collection of good poems in Malayalam.
6. During question answer session in Malayalam classes I wish, that the questions were not to me.
7. My great ambition is to become a good Malayalam teacher.

8. When I get new text books at the reopening of school, I am eager to read Malayalam texts.
9. When teacher asks questions in Malayalam class, I will not think of answering unless the question is pointed to me.
10. It is mere waste of time to hear the speeches of Malayalam orators.
11. I will never miss an opportunity to hear Malayalam speeches.
12. Interest in Malayalam can be increased among students by preparing different articles and life histories of famous writers in Malayalam.
13. Even though I know different languages, I prefer to speak in Malayalam,
14. I do not attend Malayalam classes, as I am confident that I can pass in Malayalam examinations.
15. When my friends speak English irrelevantly I feel angry at them.
16. To speak Malayalam is against status.
17. Study of Malayalam language is essential for the better understanding of the cultural background of Kerala.
18. It is a national waste to spend money for researches in Malayalam.
19. Malayalam classes are boring.
20. Better comprehension is through Malayalam language itself.
21. There is no need of giving importance to Malayalam other than for the communication among family members.
22. I often long for hearing Malayalam songs when I am in off mood.
23. We get recognition from nears and dears, if we write in English only.
24. It is the grammar of Malayalam study that makes the Malayalam boring.
25. I like persons very much, who can sing Malayalam songs beautifully.
26. Disgracing Malayalam by Keralites is equal to disgracing our mothers.
27. I am studying Malayalam, only to pass the examination.

28. Because of spending more time to study Malayalam, I won't get enough time to study other subjects.
29. The development of spiritual, artistic and emotional aspects in children is possible through Malayalam, the mother tongue.
30. Malayalam teachers inspire children in developing the right personality.
31. Malayalam is the most disinterested language to hear or write.
32. If high status in society is the goal, give importance to the study of English.

UNIVERSITY OF CALICUT

(Department of Education)

Scale of Attitude Towards Malayalam 1991.

NAME..... SCHOOL.....

Standard..... DIV..... CLASS NO..... AGE.....

	SA	A	U	DA	SDA		SA	A	U	DA	SDA
1.	()	()	()	()	()	17.	()	()	()	()	()
2.	()	()	()	()	()	18.	()	()	()	()	()
3.	()	()	()	()	()	19.	()	()	()	()	()
4.	()	()	()	()	()	20.	()	()	()	()	()
5.	()	()	()	()	()	21.	()	()	()	()	()
6.	()	()	()	()	()	22.	()	()	()	()	()
7.	()	()	()	()	()	23.	()	()	()	()	()
8.	()	()	()	()	()	24.	()	()	()	()	()
9.	()	()	()	()	()	25.	()	()	()	()	()
10.	()	()	()	()	()	26.	()	()	()	()	()
11.	()	()	()	()	()	27.	()	()	()	()	()
12.	()	()	()	()	()	28.	()	()	()	()	()
13.	()	()	()	()	()	29.	()	()	()	()	()
14.	()	()	()	()	()	30.	()	()	()	()	()
15.	()	()	()	()	()	31.	()	()	()	()	()
16.	()	()	()	()	()	32.	()	()	()	()	()

SOCIO-FAMILIAL INVENTORY

By
Dr. A. SUKUMARAN NAIR
Dean
Faculty of Education
University of Calicut

താഴെ കൊടുത്തിരിക്കുന്ന ചോദ്യങ്ങൾ ശ്രദ്ധാപൂർവ്വം വായിച്ച് തന്നിരിക്കുന്ന ഉത്തരക്കടലാസിൽ ശരിയായ ഉത്തരത്തിനു നേരെ ശരി അടയാളം ഇടുക. ഈ പുസ്തകത്തിൽ യാതൊന്നും രേഖപ്പെടുത്തരുത്.

A. Home Learning facility

പഠനത്തിനുള്ള എതാനും സൗകര്യങ്ങൾ താഴെ തന്നിരിക്കുന്നു. ഇതിൽ ഏതെല്ലാമാണ് നിങ്ങളുടെ വീട്ടിൽ ഉള്ളത്

- | | | |
|-------------------|---------------------|------------------|
| 1. പ്രത്യേകമുറി | 2. പ്രത്യേക മേശ | 3. പ്രത്യേക കസേര |
| 4. പ്രത്യേക ഷെൽഫ് | 5. പ്രത്യേക വിളക്ക് | 6. പുസ്തകശേഖരം |

താഴെ തന്നിരിക്കുന്ന റഫറൻസ് പുസ്തകങ്ങൾ/പഠനോപകരണങ്ങൾ നിങ്ങളുടെ വീട്ടിൽ ഉണ്ടോ?

- | | | |
|---------------------|--|-------------------------|
| 7. ഇംഗ്ലീഷ് നിഘണ്ടു | 8 ഇംഗ്ലീഷ് മലയാളം നിഘണ്ടു | 9. ഹിന്ദിമലയാളം നിഘണ്ടു |
| 10. ലോഗരിതം പട്ടിക | 11. കേരളത്തിന്റെ ഭൂപടം | 12. ലോകഭൂപടം |
| 13. അറ്റ്ലസ് | 14. ജാമിതീയപെട്ടി (ഇൻസ്ട്രം മെന്റ് ബോക്സ്) | |
15. നിങ്ങളുടെ വീട്ടിൽ പഠനത്തിനായി ഒരു നിശ്ചിതസമയം അച്ഛനമ്മമാർ നിശ്ചയിച്ചിട്ടുണ്ടോ?
 16. അച്ഛനോ, അമ്മയോ മറ്റു കുടുംബാംഗങ്ങളോ നിങ്ങളുടെ പഠനസമയത്ത് പത്രങ്ങൾ, പുസ്തകങ്ങൾ തുടങ്ങിയവ വായിക്കാറുണ്ടോ?
 17. പഠിക്കുന്ന സമയത്ത് നിങ്ങളെ ആരെങ്കിലും ശല്യപ്പെടുത്താറുണ്ടോ?
 18. ഗൃഹപാഠങ്ങൾ ചെയ്തു തീർക്കാൻ വീട്ടിലെ മുതിർന്നവർ നിങ്ങളെ സഹായിക്കാറുണ്ടോ?
 19. മാതാപിതാക്കൾ നിങ്ങളുടെ പുസ്തകങ്ങൾ പരിശോധിച്ച് തെറ്റ് കണ്ടാൽ തിരുത്താറുണ്ടോ?
 20. നിങ്ങൾ പാഠങ്ങളെല്ലാം അതാതു സമയത്തുതന്നെ പഠിക്കാറുണ്ടോ എന്ന് മാതാപിതാക്കൾ പരിശോധിക്കാറുണ്ടോ?
 21. നിങ്ങളുടെ പുസ്തകങ്ങളും മറ്റു പഠനോപകരണങ്ങളും വൃത്തിയായി വെക്കാൻ അച്ഛനമ്മമാർ സഹായിക്കാറുണ്ടോ?
 22. കൃത്യസമയത്തുതന്നെ പഠനം തുടങ്ങാൻ അച്ഛനമ്മമാർ നിർബന്ധിക്കാറുണ്ടോ?
 23. പഠിച്ചുകൊണ്ടിരിക്കുമ്പോൾ തടസ്സങ്ങൾ ഉണ്ടാകുക പതിവാണോ?

B. Family Acceptance of Education

സ്കൂൾ കാര്യങ്ങളിൽ അച്ഛനമ്മമാർ നിങ്ങളെ എത്രത്തോളം സഹായിക്കുന്നുണ്ട് എന്നറിയാനുള്ള ചില പ്രസ്താവനകൾ താഴെ കൊടുത്തിരിക്കുന്നു.

1. നിങ്ങളുടെ ക്ലാസ്സിലെ നോട്ടുകളും മറ്റും അച്ഛനമ്മമാർ പരിശോധിക്കുന്നുണ്ട്
2. നിങ്ങൾക്ക് മാർക്ക് കുറഞ്ഞ വിഷയങ്ങൾ ഏതെന്നു മനസ്സിലാക്കി ആ വിഷയങ്ങൾ മാതാപിതാക്കൾ നിങ്ങളെ പഠിപ്പിക്കുന്നുണ്ട്.
3. അച്ഛനമ്മമാർ അധ്യാപകരെ ഇടക്കിടെ ചെന്നു കണ്ട് നിങ്ങളുടെ പഠിപ്പിലുള്ള പുരോഗതി അന്വേഷിക്കുന്നുണ്ട്.
4. മാതാപിതാക്കൾ സ്കൂൾ കാര്യങ്ങളെപ്പറ്റി നിങ്ങളുടെ സഹപാഠികളോട് അന്വേഷിക്കുന്നുണ്ട്.
5. സ്കൂളിലെ അധ്യാപക രക്ഷാകർത്തൃസമിതിയുടെ മീറ്റിങ്ങുകളിലും പ്രവർത്തനങ്ങളിലും അച്ഛനമ്മമാർ പങ്കെടുക്കുന്നുണ്ട്.
6. സ്കൂളിന്റെ നിലവാരം ഉയർത്താനുള്ള എല്ലാ പരിപാടികളിലും നിങ്ങളുടെ അച്ഛനമ്മമാർ സഹകരിക്കുന്നുണ്ട്.
7. മാർക്ക് കുറഞ്ഞ വിഷയങ്ങളിൽ നിങ്ങൾക്ക് രക്ഷിതാക്കൾ ട്യൂഷൻ ഏർപ്പാട് ചെയ്യാറുണ്ട്.
8. ഒരദ്ധ്യയനവർഷത്തിൽ എന്തെല്ലാം വിഷയങ്ങൾ എങ്ങനെയെല്ലാം പഠിക്കണമെന്ന് കാലേക്കൂട്ടി ആസൂത്രണം ചെയ്യാൻ അച്ഛനമ്മമാർ നിങ്ങളെ സഹായിക്കുന്നുണ്ട്.
9. പാഠപുസ്തകങ്ങൾ യഥാസമയം വാങ്ങിത്തരാറുണ്ട്.
10. നിങ്ങൾക്ക് പ്രത്യേക താല്പര്യമുള്ള വിഷയങ്ങളെപ്പറ്റിയുള്ള മറ്റു പുസ്തകങ്ങൾ നിങ്ങൾക്ക് രക്ഷിതാക്കൾ വാങ്ങിത്തരാറുണ്ട്.
11. വിദ്യാഭ്യാസകാര്യങ്ങൾക്ക് മറ്റേതൊരു കാര്യത്തെക്കാളും പ്രാധാന്യം നിങ്ങളുടെ അച്ഛനമ്മമാർ നൽകുന്നുണ്ട്.
12. നല്ല കുട്ടികളുമായി സൗഹൃദം സ്ഥാപിക്കാൻ അച്ഛനമ്മമാർ നിങ്ങളെ നിർബന്ധിക്കുന്നുണ്ട്.
13. വിനോദയാത്രകളിലും പഠനയാത്രകളിലും പങ്കെടുക്കാൻ അച്ഛനമ്മമാർ നിങ്ങളെ പ്രോത്സാഹിപ്പിക്കുന്നുണ്ട്.
14. സ്കൂളിൽ നടക്കുന്ന കളികൾ, സ്പോർട്സ് എന്നിവയിൽ പങ്കെടുക്കാൻ അച്ഛനമ്മമാർ നിങ്ങളെ പ്രോത്സാഹിപ്പിക്കുന്നുണ്ട്.
15. പരീക്ഷക്ക് കൂടുതൽ മാർക്ക് വാങ്ങണമെന്ന് നിങ്ങളുടെ മാതാപിതാക്കൾ നിങ്ങളോട് പറയാറുണ്ട്.
16. നിങ്ങളെ ഏതുവരെ പഠിപ്പിക്കണമെന്നാണ് അച്ഛനും അമ്മയും ആഗ്രഹിക്കുന്നത്.
a) യൂണിവേഴ്സിറ്റി (b) സാങ്കേതികവിദ്യാഭ്യാസം (c) S.S.L.C വരെ

C. Family Cultural Level

1. നിങ്ങളുടെ കുടുംബത്തിൽ വരുത്താനുള്ള പത്രങ്ങളുടെ എണ്ണം
2. നിങ്ങളുടെ വീട്ടിൽ വാങ്ങുന്ന വാരികകൾ/ മാസികകൾ ഇവയുടെ എണ്ണം
3. നിങ്ങൾ അംഗങ്ങളായ സാംസ്കാരിക സംഘടനകളുടെ എണ്ണം

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4. ഒരു മാസത്തിൽ നിങ്ങൾ കാണുന്ന സിനിമകളുടെ എണ്ണം
5. നിങ്ങൾ കാണുന്ന നാടകങ്ങൾ/ നൃത്തങ്ങൾ ഇതുപോലുള്ള മറ്റിനങ്ങൾ
6. നിങ്ങളോ, നിങ്ങളുടെ കുടുംബാംഗങ്ങളോ അംഗങ്ങളായ ലൈബ്രറികളുടെ എണ്ണം
7. നിങ്ങളുടെ വീട്ടിലുള്ള റേഡിയോ/ട്രൈപ്പിക്ക്കോർഡർ/ടെലിവിഷൻ തുടങ്ങിയവയുടെ എണ്ണം.
8. നിങ്ങളുടെ ഭാഷ തെറ്റായി സംസാരിക്കുമ്പോൾ മാതാപിതാക്കൾ തിരുത്താറുണ്ട്.
9. മറ്റുള്ളവർക്ക് തൃപ്തികരമല്ലാത്ത രീതിയിൽ പെരുമാറുമ്പോൾ നിങ്ങളെ പഠിപ്പിക്കാറുണ്ട്.
10. അന്യരുമായി ഇടപഴകുമ്പോൾ നല്ല രീതിയിൽ പെരുമാറാൻ നിങ്ങളെ പഠിപ്പിക്കാറുണ്ട്.
11. പത്രം വായിക്കണമെന്ന് നിങ്ങളോട് മാതാപിതാക്കൾ ആവശ്യപ്പെടാറുണ്ട്.
12. വായിക്കുന്ന കാര്യങ്ങളെപ്പറ്റി ചെറുകുറിപ്പുകൾ എഴുതാൻ നിങ്ങളോടാവശ്യപ്പെടാറുണ്ട്.
13. റേഡിയോവാർത്തകളും വിദ്യാഭ്യാസപരിപാടികളും ശ്രദ്ധിക്കാൻ നിങ്ങളോടാവശ്യപ്പെടാറുണ്ട്.

D. Family Environment

1. നിങ്ങളുടെ വീടിനു ചുറ്റുമുള്ള വിദ്യാഭ്യാസസമ്പന്നരായ കുടുംബങ്ങളുടെ എണ്ണം
2. നിങ്ങളുടെ ചുറ്റുപാടുകളിൽ താമസിക്കുന്ന ഉയർന്ന ഉദ്യോഗമുള്ളവരുടെ എണ്ണം
3. ആ പ്രദേശത്തുള്ള വലിയ കെട്ടിടങ്ങളുടെ എണ്ണം
4. ആ പ്രദേശത്തുള്ള സാമൂഹികസാംസ്കാരിക സംഘടനകളുടെ എണ്ണം.
5. കുട്ടികളുടേത് മാത്രമായ ക്ലബ്ബുകളുടെയും സംഘടനകളുടെയും എണ്ണം
6. ആ പ്രദേശത്തുള്ള വായനശാലകളുടെയും ഗ്രന്ഥശാലകളുടെയും എണ്ണം
7. ആ പ്രദേശത്തുള്ള നഴ്സറി സ്കൂളുകളുടെ/ക്രഷുകളുടെ എണ്ണം
8. അവിടെയുള്ള കമ്മ്യൂണിറ്റിഹാളുകളുടെ എണ്ണം.
9. ആ പ്രദേശത്തുള്ള വിലപിടിച്ച ഗൃഹോപകരണങ്ങളുള്ള (വാഹനങ്ങൾ, ഫ്രിഡ്ജുകൾ, ടെലിഫോൺ, ടെലിവിഷൻ) വീടുകളുടെ എണ്ണം.
10. ആ പ്രദേശത്തുള്ള സ്കൂളിൽ പോകുന്ന കുട്ടികളുടെ എണ്ണം
11. പാനത്തിനും സാമൂഹ്യപ്രവർത്തനങ്ങൾക്കും അയൽക്കാരിൽനിന്ന് സഹായം കിട്ടാനുള്ള സാധ്യത.
12. അയൽക്കാരിൽനിന്ന് പുസ്തകങ്ങൾ/ മാസികകൾ/വാരികകൾ ഇവ കടമായി കിട്ടാനുള്ള സാധ്യത.
13. അയൽവാസികളുമായി വഴക്കുണ്ടാകുന്നതിനുള്ള സാധ്യത
14. യാദൃശ്ചികമായി ആപത്തുകൾ ഉണ്ടാകുമ്പോൾ അയൽവാസികളിൽനിന്ന് സഹായം കിട്ടാനുള്ള സാധ്യത.

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UNIVERSITY OF CALICUT

Socio -Familal Inventory

SCORE SHEET

Name Standard/Division.....
 School Age
 Class No Boy/Girl

A

	ഉണ്ട്	ഇല്ല		ഉണ്ട്	ഇല്ല		ഉണ്ട്	ഇല്ല
1.	()	()	9.	()	()	17.	()	()
2.	()	()	10.	()	()	18.	()	()
3.	()	()	11.	()	()	19.	()	()
4.	()	()	12.	()	()	20.	()	()
5.	()	()	13.	()	()	21.	()	()
6.	()	()	14.	()	()	22.	()	()
7.	()	()	15.	()	()	23.	()	()
8.	()	()	16.	()	()			

B

എല്ലായ്പ്പോഴും. ചിലപ്പോഴൊക്കെ. ഒരിക്കലുംഇല്ല. എല്ലായ്പ്പോഴും. ചിലപ്പോഴൊക്കെ. ഒരിക്കലുംഇല്ല

1.	()	()	()	9.	()	()	()
2.	()	()	()	10.	()	()	()
3.	()	()	()	11.	()	()	()
4.	()	()	()	12.	()	()	()
5.	()	()	()	13.	()	()	()
6.	()	()	()	14.	()	()	()
7.	()	()	()	15.	()	()	()
8.	()	()	()	16.a	()	b()	c()

C

വളരെയധികം കുറച്ച് ഒട്ടും ഇല്ല എല്ലായ്പ്പോഴും ചിലപ്പോഴൊക്കെ ഒരിക്കലുംഇല്ല

1.	()	()	()	9.	()	()	()
2.	()	()	()	10.	()	()	()
3.	()	()	()	11.	()	()	()
4.	()	()	()	12.	()	()	()
5.	()	()	()	13.	()	()	()
6.	()	()	()				
7.	()	()	()				
8.	()	()	()				

D

ധാരാളം കുറച്ച് ഇല്ല ധാരാളം കുറച്ച് ഇല്ല

1.	()	()	()	9.	()	()	()
2.	()	()	()	10.	()	()	()
3.	()	()	()	11.	()	()	()
4.	()	()	()	12.	()	()	()
5.	()	()	()	13.	()	()	()
6.	()	()	()	14.	()	()	()
7.	()	()	()				
8.	()	()	()				

**DEPARTMENT OF EDUCATION
UNIVERSITY OF CALICUT
GENERAL DATA SHEET**

നിർദ്ദേശങ്ങൾ : ഗവേഷണത്തിനുപയോഗിക്കാനായി നിങ്ങളുടെ വ്യക്തിപരമായ വിവരങ്ങൾ ശ്രദ്ധാർഹമായി നൽകേണ്ടതും ഉദ്ദേശിക്കുന്നത്. വിവരങ്ങൾ കഴിയാവുന്നിടത്തോളം ശരിയായി രേഖപ്പെടുത്തുക.

- | | |
|---------------------------------|------------------------------------|
| (1) പേര്..... | (2) ആൺകുട്ടി/പെൺകുട്ടി..... |
| (3) വയസ്സ്..... | (4) മതം..... |
| (5) ജാതി..... | (6) സ്കൂളിന്റെ പേര്..... |
| (7) സ്റ്റാൻഡേർഡ്..... | (8) ഡിവിഷൻ..... |
| (9) ഇളയ സഹോദരങ്ങളുടെ എണ്ണം..... | (10) മുത്ത സഹോദരങ്ങളുടെ എണ്ണം..... |
- (11) സ്ഥലം (പഞ്ചായത്ത്, മുനിസിപ്പാലിറ്റി, കോർപ്പറേഷൻ)
- (12) രക്ഷാകർത്താവിന്റെ പേര്.....
- (13) കടബാധമില്ലാത്ത വിവരം (വിവരങ്ങൾ X അടയാളം കൊണ്ട് രേഖപ്പെടുത്തുക)

A വിദ്യാഭ്യാസം	പിതാവ്	മതതാവ്	മറ്റുള്ളവർ
പ്രൈമറി വിദ്യാഭ്യാസം			
മിഡിൽ സ്കൂൾ വിദ്യാഭ്യാസം			
ഹൈസ്കൂൾ വിദ്യാഭ്യാസം			
ഇൻറർമീഡിയറ്റ് (റി. റി. സി., പി. ഡി. സി. മുതലായവ)			
ബി. എ. ബി. എസ്സ്. സി., ബി.കോ. മുതലായവ			
എം. എ., എം. എസ്സ്. സി., എം. ടെക്നോ. എഞ്ചിനീയറിംഗ്, എം. ബി. ബി. എസ്. മുതലായവ			
B ജോലി			
C രക്ഷാകർത്താവിന്റെ പ്രതിമാസ വരുമാനം			
(a) 1000 രൂപയ്ക്ക് താഴെ			
(b) 1001-രൂപയ്ക്ക് -2000 രൂപയ്ക്ക് ഇടയ്ക്ക്			
(c) 2001 രൂപയ്ക്ക് 3000 രൂപയ്ക്ക് ഇടയ്ക്ക്			
(d) 3001 രൂപയ്ക്ക് 4000 രൂപയ്ക്ക് ഇടയ്ക്ക്			
(e) 4001- " 5000 "))			
(f) 5000 " മുകളിൽ			

MARKS OBTAINED IN THE LAST EXAMINATION

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|--------------|-------|------------------|-------|
| (a) മലയാളം | | (e) ബയോളജി | |
| (b) ഇംഗ്ലീഷ് | | (f) കെമിസ്ട്രി | |
| (c) ഹിന്ദി | | (g) കണക്ക് | |
| (d) ഫിസിക്സ് | | (h) സോഷ്യൽ സയൻസ് | |

DETAILS OF SCHOOL WISE DISTRIBUTION OF FINAL SAMPLE

Sl. No.	Name of Schools	Locale	Nature of school (Boys/Girls/Co-ed.)	Type of Management	Efficiency level	Sex		Total
1	Vivekodayam High School for Boys, Trichur	Urban	Boys	Private	Average	40	--	40
2	Govt.H S for Girls, Wandoor, Malappuram	Rural	Girls	Govt.	Below Average	--	28	28
3	Govt. Model High School (Boys), Trichur	Urban	Boys	Govt.	Average	33	--	33
4	M.G.M.H.S. Kuruppampady, Ernakulam	Rural	Co-ed.	Private	Average	14	21	35
5	NSS HS Chakkalakkuthu, Nilambur	Rural	Co-ed.	Private	Average	17	19	36
6	Govt. Model High School, Palakkuzha, Ernakulam	Rural	Co-ed.	Govt.	Above Average	21	23	44
7	Govt.High School, West Kodikkulam, Idukki	Rural	Co-ed.	Govt.	Above Average	17	22	39
8	SS HS Thodupuzha, Idukki.	Urban	Co-ed.	Private	Below Average	25	32	57
9	St.Thomas HS Keezhillam, Ernakulam	Rural	Co-ed.	Private	Average	19	18	37
10	Govt. H.S. Vaniyambalam, Malappuram	Rural	Co-ed.	Govt.	Below Average	22	10	32
11	Govt. High School, Moovattupuzha	Urban	Co-ed.	Govt.	Above Average	13	20	33
12	NSS HS Moovattupuzha	Urban	Co-ed.	Private	Above Average	23	9	32
13	SSHS Vazhithala, Idukki	Rural	Girls	Private	Above Average	--	36	36
14	SS HS Purapuzha, Idukki	Rural	Co-ed.	Private	Average	23	26	49
15	Nirmala HS Kundukadu, Trichur	Rural	Girls	Private	Average	--	40	40
16	GHS Villadam, Trichur	Rural	Boys	Govt.	Below Average	48	--	48
17	VMCGHS for Boys, Wandoor	Rural	Boys	Govt.	Average	39	--	39
18	Vivekodayam H.S. for Girls, Trichur	Urban	Girls	Private	Average	--	36	36
19	GGHS Manjeri, Malappuram	Urban	Girls	Govt.	Average	--	21	21
						353	362	715

NRHES