CHAPTER III

METHODOLOGY

In this chapter, selection of subjects, selection of variables, orientation of subjects, selection of tests, test administration, experimental design and statistical techniques have been discussed.

3.1. SELECTION OF SUBJECTS:

150 students of high school, aging 14 to 16 years are randomly selected from Govt. High School Nagathan Tq: Dist: Vijayapur.

a. Control group 50 subjects

b. Experimental group-1(Yogic exercise) 50 subjects

c. Experimental group-2(Physical exercise) 50 subjects.

Table No 1 distributions of sample size

<table>
<thead>
<tr>
<th>Sample group</th>
<th>Yogic Group</th>
<th>Physical exercises</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>150</td>
</tr>
</tbody>
</table>

3.2 SELECTION OF VARIABLES:

The researcher has reviewed the available literature in the area before designing the study and based on personal experience, discussions held with the guide other experts and considering other factors such as feasibility, availability of proper techniques and instruments the following variables are selected.

I. Motor Variables:

1. Speed

2. Cardio-respiratory Endurance

3. Leg explosive power

4. Agility
II. **Physiological Variables:**

1. Blood pressure
2. Pulse rate
3. Vital capacity
4. Body fat

III. **Psychological Variables:**

1. Anxiety
2. Aggression
3. Emotional intelligence and
4. Social Maturity

3.3 **Orientation of Subjects:**

The purpose of the study and the nature of the training programme are clearly explained by the researcher before the commencement of the study to the subjects. The various tests in which the subjects have to participate are also explained and demonstrated.

The subjects are assembled in a class room and then the researcher explained them the nature and purpose of the study, the tests designed and the method to perform and to answer the questionnaire.

The tests are conducted before the Yoga and Physical exercise training for control and experimental groups. The final test will be conducted after the completion of the 12 weeks of the training and the same are taken for the analysis. The questionnaires of psychological variables are also administered during the training.

3.4 **Statistical Tools:**

The statistical tools ANOCOVA, ANNOVA, Scheffe’s Post Hoc Test were used to analyse the effect of independent variables on dependent variables.
### Table-2

Table showing the selected Motor Variables, Tests and Criterion measures.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Motor Variables</th>
<th>Test</th>
<th>Criterion Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Speed</td>
<td>30 mtrs dash</td>
<td>Seconds</td>
</tr>
<tr>
<td>2</td>
<td>Cardio-respiratory endurance</td>
<td>Spot Jump</td>
<td>Minutes/Seconds</td>
</tr>
<tr>
<td>3</td>
<td>Leg explosive power</td>
<td>Vertical Jump</td>
<td>Meters</td>
</tr>
<tr>
<td>4</td>
<td>Agility</td>
<td>Shuttle run</td>
<td>Seconds</td>
</tr>
</tbody>
</table>

### TABLE 3

Table showing the selected Physiological variables, Tools and Criterion measures

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Physiological Variables</th>
<th>Tools</th>
<th>Criterion Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blood Pressure</td>
<td>Sphygmomanometer</td>
<td>mg/hg</td>
</tr>
<tr>
<td>2</td>
<td>Pulse Rate</td>
<td>Swiss made stop watch</td>
<td>Seconds</td>
</tr>
<tr>
<td>3</td>
<td>Vital Capacity</td>
<td>Wet Spiro meter</td>
<td>Seconds</td>
</tr>
<tr>
<td>4</td>
<td>Body Fat</td>
<td>Help of formula</td>
<td>Kgs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$(1.51 \times \text{BMI})- (0.70 \times \text{Age})- (3.6 \times \text{Gender})+1.4$ * Where Male Gender=1, Female Gender=0</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4

Table showing the selected Psychological variables, Tools and Criterion measures.

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Psychological variables</th>
<th>Tools</th>
<th>Criterion Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anxiety</td>
<td>Dr. A.K.Singh (Patna), Dr. A. Sen. Gupta Questionnaire</td>
<td>Points</td>
</tr>
<tr>
<td>2</td>
<td>Aggression</td>
<td>Dr. Guru Pyari Mathur &amp; Dr. Rajkumari Bhatnagar Questionnaire</td>
<td>Points</td>
</tr>
<tr>
<td>3</td>
<td>Emotional Intelligence</td>
<td>Prof. Thimaguzam Questionnaire</td>
<td>Points</td>
</tr>
<tr>
<td>4</td>
<td>Social Maturity</td>
<td>Dr Nalini Rao Questionnaire</td>
<td>Points</td>
</tr>
</tbody>
</table>

3.5 Instrument Reliability:

The equipment required for the tests are thoroughly checked before use and the investigator has oriented him about the procedure and method or handling the instructions. The equipments used are in good condition. Standard equipment and standardized questionnaires are used for the tests.

3.6 Tester Reliability:

Tests are conducting with the help of the Physical Education teacher who are professionally trained and few other teachers and student leaders. All of them are oriented sufficiently before administering the tests.

3.7 Experimental Design:

For the present study randomized groups pre-test and post test design is used. In this design, subjects are assigned to the experimental and control groups randomly and are given pre-test on the dependent variables for 150 students and divided into
three groups. The first group is treated as control group. The second group is treated as experimental group 1 (Yogic exercise group) and the third group is treated as experimental group 2 (physical exercise group). Each group consist 50 subjects. The training has given for a specified period of time after which three groups are measured on the dependent variables. The average difference between the pre-test and post-test is found for each group is compared in order to find out whether the experimental group produced a greater change than the control group. The design can be presented as,

**TABLE 5**

Table showing the experimental design

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Phy. Ex1 and Y1</td>
<td>----</td>
<td>Phy. Ex2 and Y2</td>
<td>P2-P1 &amp; Y2-Y1</td>
</tr>
<tr>
<td>Experimental 1</td>
<td>Y1</td>
<td>Yogic exercise</td>
<td>Y2</td>
<td>Y2-Y1</td>
</tr>
<tr>
<td>Experimental 2</td>
<td>Phy. Ex 1</td>
<td>Physical exercise</td>
<td>Phy. Ex2</td>
<td>P2-P1</td>
</tr>
</tbody>
</table>

The before and after measure in this design was permitted the investigator to study change and it is often referred to as the classical design for change experiments. The main strength of this design is the initial randomization which assures equivalence between the groups prior to experimentation. In addition it teaches the experimenter has control of the pre-test has provided an additional check on the equality of the three groups on the dependent variables.

For the present study 150 students of age 14-16 years, 50 control group (not underwent any training), 50 experimental group (who has underwent Yoga training) and 50 experimental group (who has underwent Physical exercise training) are
studying in Govt. High School Nagathan Tq: Dist: Vijayapur are selected as subjects.

3.8 YOGASANAS SELECTED FOR TRAINING PURPOSE

The Asanas selected for the training purpose are as follows.

a. Simple free hand exercises
b. Surya Namaskar

WARMING UP ACTIVITIES:

1. Stand erects with the legs together take the hands above the head and bend the trunk backwards and inhale fully.

2. Bend the body in front and touch knee by the forehead, keep the palms on the floor.

3. Keep the right leg back takes the left knee forward, look up and inhale.

4. Take the left leg also back, resting only on palms and toes, keep body straight from head to toes inclined to the ground at about 30 degree and exhale completely.

5. Without moving the hands toes come forward on the chest and rest the forehead. In this position of Ashtanga Namaskar. Forehead, chest, hands, knee and legs all the eight parts will be touching the ground. The buttocks will be raised up stay in breath out condition.

6. Inhale raise the head the trunk making the spine concave upwards without changing the position of the hands feet keep the knee of the ground.

7. Exhale raise the buttocks push the head down and have a complete arch with the heels touching the ground and palms on the floor.

8. Inhale and bring the right leg in between the two hands inhale them. Arch back concave upwards as in step three.

9. Exhale and bring the left foot forward next to the right foot and touch the knee with fore head as in count two.
10. Inhale and come up and stand with hands along the body and relax (in 10 stages of Surya Namasakar)

1. **BHUJANGASANA:**

**POSITION:**

Lay prone on the blanket keeping the legs together, chin touching and soles are facing up. Stretch the hands straight forward alongside the head resting the palms on the ground.

**COUNT NO 1:** Bring the arms back to the level of the left rib. Keep the hands bent at elbows, least pressure to be on the hands maintain the elbows touching the body, fist not spread out.

**COUNT NO.2:** Without inhale raise the hand fist and then upper portion of the trunk slowly, just as the Cobra rises, till the navel position is about to leave the ground. Arch the dorsal and spine well keep the body below. The navel straight in touch with the ground. Retain the posture about one minute come back to the position lying of prone.
BENEFITS:

a) Bhujangasana considerably influences the development of the abdominal muscles.

b) This exercise promotes the blood circulation of these parts and influences these nerves to maintain the health and activity.

2. Dhanurasana

POSITION: Lay flat on the abdomen and chest with chin touching the ground. Keep legs straight and together, feet together with soles facing upwards, stretch the arms above the head along the ears, with palms resting on the ground.

COUNT NO: 1

Bend the knees and hold the feet by the hands.

COUNT NO: 2

Raise the head, chest and also thigh by tugging the hands and legs so that the spine is arched backwards like a bow. Stabilize on the abdomen. elbows must be kept unbent loop up. Initially the knees will spread out but with practice. They can be brought very near. Almost touching each other maintain for about half a minute slowly come down for position through 3 and 4.
**BENEFITS:**

The hygienic features of this posture are the extraordinary amount of pressure, due to the whole body being thrown upon the umbilical region only: the extreme stretching of the abdominal and pelvic muscles, and the steady pull anterior pull throughout the spinal column, with the alternate contraction and relaxation of the spinal muscle. Further the venous drainage facilities fresh supply of blood to the abdominal viscera, especially of the lower abdomen and the reproductory organs. Several muscles, including the extensors of the hip. Elbow, wrist and trunk, and the abductors of the shoulder joints are exercised by this asanas. The quadriceps and pectorals are also stained thanks to holding the legs in the bow curve position.

3. **SARVANGASANA:**

**POSITION:** Lay supine on the ground over a blanket, keeping the arms stretched above the head.

**COUNT NO: 1**

Raise the legs together very slowly and gracefully till it forms about 45 degrees to the ground.

**COUNT NO: 2**

Raise the legs further to 90 degrees position.

**COUNT NO: 3**

Raise the buttocks and the trunk with taking support of the arms and the elbows without lifting the head. Rest the elbows on the ground firmly and support the back with both the palms straightens the trunk with the hands till the chin is well set in suprastenal hallow. Bring the legs parallel to the ground.
COUNT NO: 4

Keep the bodies erect stretching it up vertically supporting on the shoulders but relaxingly. Slowly come back to position though 5 and 8.

Benefits:

1. Alleviates hypertension, relives Insomnia and soothes the nerves.
2. Improves the functioning of the Thyroid and Parathyroid glands.
3. Alleviates Asthma, Bronchitis and Throat ailments.
4. Relives breathlessness and palpitation.
5. Helps to treat cold and sinus blockages.
6. Alleviates Urinary disorder and helps to treat Hernia.
7. Reduces menstrual cramps and helps to regulate menstrual flow, if done regularly between two menstrual periods.
8. Relives congestion and heaviness in the ovaries and helps to treat ovarian cysts.
4. **HALASANA:**

**POSITION:** Lay down on the back with hands stretched above the head biceps touching the ears and feet joined together.

**COUNT NO: 1**

Inhale and simultaneously lift the legs off the ground, raise them firm at an angle of 45 degrees with the ground, behind the head.

**COUNT NO: 2**

Bring down the arms and rest the palms on ground on either side of the body press the ground hard with palms and bring the legs perpendicular to the ground inhaling further.

**COUNT NO: 3**

Exhaling stretch the legs further to bring them parallel to the ground. Support the legs with the hands.

**COUNT NO: 4**

Exhaling further bring the feet down so that the legs touch the ground. See that should not bend the knees. Do not force if the toes do not touch the ground leave them wherever they are, maintain the posture for about one minute, or as long as we can.
BENEFITS:

4. It stretches the shoulders and spine and improves flexibility.
5. It stimulates the abdominal organs and the Thyroid Gland.
6. It helps to reduce stress and fatigue and calms the mind.
7. It is useful for backache, headache, infertility, Insomnia and Sinusitis.

5. SHALABHASANA:

POSITION: Lay prone on the blanket keeping the legs together chin touching and soles face up. Stretch the hands straight forward alongside the head resting the palms on the ground.

COUNT NO: 1

Lay flat on the abdomen and chest with chin touching the ground. Keep the legs straight and together with soles facing upwards stretch the arms above the head along the ears with palms resting on the ground.

COUNT NO: 2

Bring the hands down, shut the hands into fist keeping the thumbs inside and place them under the respective knee joints.

COUNT NO: 3

Inhale and hold the breath raise the legs up together from the waist with the support of the fist without bending the knees. This is the final posture. Maintain as long as we can hold the breath slowly come back to position.
BENEFITS:
8 Muscles of lower back and legs get strengthened.
9 It helps to reduce flab from thighs, hips, waist, abdomen and buttocks.
10 Waist becomes supple and resilient.
11 Heart muscles get massaged and function well.
12 Regular practice of the pose can get rid of a bulging tummy.

6. **VIPARITA KARANI**

**POSITION:** Lay supine on the ground over a blanket, keeping the arms stretched above the head.

**COUNT NO 1:**
Place the block in its long side against a wall. Place the bolsters, one on top of the other, parallel to the block. Drape the blanket over the bolsters. Then sit sideways in the middle of the bolsters and place your fingers flat on the floor behind you.

**COUNT NO 2:**
Turn your torso toward the wall, simultaneously lifting your legs, one by one onto the wall. Keep your knees slightly bent. Support your body on both palms, fingers pointing toward the bolsters. Push both palms down on the floor, and move your buttocks closer to the wall.
COUNT NO 3:

Bend your elbows and lower your torso until your shoulders rest on the floor. Straighten your legs fully. If your buttocks have moved away from the wall, bend your knees and place both feet against the wall. Then press your palms down on the floor, lift your hips and move the buttocks closer to the wall. Straighten your legs again.

COUNT NO 4:

Rest your head and neck on the floor, and lift your chest. Move your shoulders backward toward the bolsters. Spread your arms out to the sides with your palms facing the ceiling. Allow your chest, abdomen and pelvis to expand and relax. Straighten and stretch your legs. Close your eyes breathe evenly and experience the serenity of the pose. Stay in the pose for 1-2 minutes.
BENEFITS:

1. Regulates blood pressure and helps to treat cardiac disorders.
2. Helps to treat ear and eye ailments. Stress-related headaches and migraine.
3. Relieves palpitation, breathlessness, and asthma, bronchitis and throat ailments.
4. Alleviates Arthritis and cervical Spondylosis.
5. Relives indigestion, diarrhea and nausea.
6. Helps to treat kidney disorders and prevents varicose veins.

MATSYENDRASANA:

POSITION: Sit erect, stretching the legs in front together, hands by the side, palms resting on the ground, fingers together pointing forward.

COUNT NO 1:

Bend your right knee and pull your right foot towards left thigh so that right heel touches left buttocks. Further bend your left knee and place beside the right knee sprightly.

COUNT NO 2:

Exhale and lift your spine. Turn your torso 90 degrees to the left. Bend the right arm and moving your shoulder forward. Do not allow your right leg to tilt.

COUNT NO 3:

Turn from your waist first and then the chest. Exhale and encircle your left knee with your right arm.

COUNT NO 4:

Take your left arm behind your back. Bring it on the right thigh. Lift your torso and rotate further to the left. Turn your head to the left and look over back side. Hold the pose for one minute breath evenly.
BENEFITS:

1. Increases energy level.
2. Tones and massages the abdominal organs.
3. Improves the functioning of the liver, spleen, pancreas, kidneys and intestines.
4. Reduces fat around the waistline.
5. Alleviates backache and relieves lumbago.

7. PASCHIMOTANASANA:

POSITION: Sit erect, stretching the legs in front together, hands by the side, palms resting on the ground, fingers together pointing forward.

COUNT NO: 1

Raise the both hands till they come to a straight line parallel to the ground.

COUNT NO: 2

Inhale and raise the hands to vertical position arms touching the ears, palms facing front stretch up the whole body.

COUNT NO: 3

Bend the trunk forward relaxingly with continuous exhalation, body and hands parallel to the ground.
COUNT NO: 4

From the hooks of the index fingers and catch hold of the big toes rest the face
on the knees and touch the elbows to the ground. Do not allow the knee to bend,
normal breathing retain the position of about one minute, come back to position
through 5 to 8.

BENEFITS:

1. Rests and massage the head
2. Smoothes the adrenal glands
3. Tones the Kidneys, bladder and Pancreas.
4. Activities a sluggish liver and improves the digestive system.
5. Helps to treat impotence.
6. Stimulates the Ovaries, Uterus and the entire Reproductive system.
Table No 6

TABLE SHOWING THE 12 WEEKS OF YOGA TRAINING

<table>
<thead>
<tr>
<th>WEEK</th>
<th>ASANAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st}) week</td>
<td>Introducing to Yoga and Surya Namaskar</td>
</tr>
<tr>
<td>2(^{nd}) week</td>
<td>Warming up activities, Suryanamaskar, simple standing and sitting Asanas and introducing of Pranayama with simple breathing.</td>
</tr>
<tr>
<td>3(^{rd}) week</td>
<td>Repetition of the above and standing forward and backward bending Asanas.</td>
</tr>
<tr>
<td>4(^{th}) week</td>
<td>Repetition of the above and introducing of supine and prone lying Asanas and few new techniques of Pranayama.</td>
</tr>
<tr>
<td>5(^{th}) week</td>
<td>Repetition of the above and introducing of twisting Asanas.</td>
</tr>
<tr>
<td>6(^{th}) week</td>
<td>Combination of standing, sitting, twisting, balancing, prone and supine lying Asanas and different techniques of Pranayama.</td>
</tr>
<tr>
<td>7(^{th}) to 12(^{th}) week</td>
<td>Starting with Suryanamaskar all the other Asanas standing, sitting, bending, lying, balancing Asanas and Pranayama were taught and were made to practice with some alternations whenever required.</td>
</tr>
<tr>
<td></td>
<td>All periods of Asanas were concluded with relaxation Asanas.</td>
</tr>
<tr>
<td></td>
<td>Mind setting and goal setting techniques were also used during training.</td>
</tr>
</tbody>
</table>
DESCRIPTION OF TESTS:

PHYSICAL EXERCISES:

The following selected physical exercises were considered for the training to the experimental group II.

1. Hollow Sprint
2. Push-Ups
3. Squat Thrust
4. Vertical Jump
5. Slalom Running
6. Four count jumping jack
7. Sit ups
8. Shuttle run

1. Hollow Sprint:
Hollow Sprint involves Sprinting, Jogging, Walking and repeating. That is sprint 100 Meters Jogging 100 Meters Sprint 100 Meters and walk 100 Meters for recovery in a 400 Meters track.

2. **Push-Ups:**

   Lean front with back straight. Bend the arms by lowering the body slowly downwards until the chest touches the floor. Straight the arms return to the starting position. The subjects performed push-ups for one minute in one bout.

   After a rest of two minutes in between each bout, they performed three bouts for the first two weeks, four bouts in the second two weeks and five bouts in the last two weeks.

3. **Squat Thrust:**

   The Squat Thrust was given in the following manner. Action by four count movement.

   a. Bend knees and place the hands on the floor in front of the feet, arms either outside or in front of the knees.

   b. Thrust legs back until the back is straight from shoulder to feet(push-up position)
c. Return to squat position.

d. Return to standing position.

All the subjects were asked to come to erect standing position at the completion of each squat thrust. During the first two weeks they were asked to do 10 squat thrusts, 15 during the second two weeks and 20 squat thrusts during the last four weeks.

4. **Vertical Jump:**

The subjects were asked to stand erect with hands on hips with sufficient gap in between them. On whistle, they start jumping as high as possible continuously without break for about one minute. During the first two weeks it was done for one minute in two bouts with a rest of two minutes in between each bout. During the second two weeks, the subjects performed the same in four bouts of one and a half minutes duration of each bout and a rest of two minutes in between each bout. During the last two weeks, they performed 5 bouts, each bout for two minutes with three minutes rest in between each bout.
5. Slalom Running:

Six survey poles were placed in a line with a distance of one meter in between they were fixed vertically. Each subject was asked to run in between the poles zigzag manner up and down for 5 times during first two weeks, 7 times during second two weeks and 10 times during the last four weeks.
6. Four count Jumping Jack:

   a. Arms side ward stretched at the same time feet apart jump.

   b. Arms upward raise the legs, come close.

   c. Come to position one.

   d. Come to starting position.

   The four count exercises were done as follows,

   During the first two weeks 10 times, during the second two weeks 15 times and twenty during the left four weeks.

7. Sit ups:

   The subjects were asked to stand erect with arms should be at the shoulders level. When the stop watch starts the subject should bend the knees and sit down at the same time should be get up and stand erect. The subject should continue the exercise till the stop watch stops at 30 sec.the number of sit ups was recorded for the subject’s performance for the sit ups.
8. **Shuttle Run:**

The subjects were asked to stand in a row and when the whistle blows by the Teacher and time starts they should run towards the 5 Mtrs line then touch the line and comeback to the starting line then continue for the second line. Similarly they should reach all the marked lines and complete the race. The rounds completed by the subjects were recorded in sec.
Procedure of administering and scoring of psychological variables

3.9 ACADEMIC ANXIETY SCALE FOR CHILDREN

Today ways (Goodstein and Lanyon). Generally, anxiety can be either the trait anxiety are state anxiety. A trait anxiety is a stable characteristic and trait of the person. A state anxiety is one which is aroused by some temporary condition of the environment such as examination, accident, punishment, etc. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environments of the academic institutions including teachers, certain subjects like mathematics, English anxiety, is a common phenomenon of everyday life. It plays crucial role in human life because all of us are the victim of anxiety in different etc.

INSTRUCTIONS

Following steps will be use full in administering the academic anxiety scale for children (AASC)

1. All the students should be asked to sit compatibly and rapport should be established with brief general talks with the pupils.

2. Instructions printed on the test should be read by the researcher and the student should also read it silently.

3. If there is any confusion regarding the instructions, they should ask by rising their hand. There is nothing wrong or right in the answer.

4. There is no fixed time limit for the test. But ordinarily the pupil takes 10 to 15 minutes time in completing the test.

5. The researcher should assure the students that there answers would always remain confidential.

He must make every effort to secure the sincere co-operation from the students.

6. As soon as the pupils finish their work, test materials should be collected.
3.10 AGGRESSION SCALE

It is due to frustrations based on emotional distributions and hostility. Environment acts of behavior. He may heart is victim Aggression is disorganizing emotional response is a cogent factor in arousing aggression. The latter, ones aroused, may lead to hostile and destructive behavior. It is, in a sense, manifestations of a self assertive disposition and use of some kind of force. If the aggressor’s responses are evoked by stimuli in the situation quite often, he would show impulsive or expressive.

Instructions and Administrations

1. It is a self-administering questionnaire. It is administered to a group as well as to an individual. The instructions printed on the test form should be read by test administrator as well as the test.

2. No time limits are fixed for completing the test. However, usually an individual takes 25 to 30 minutes in completing the test.

3. It should be noted that there is no right or wrong response to the statement. It is only to know the individual’s reactions in different situations.

4. It is emphasized that each statement has to be responded in one of the five alternatives.

5. No statement is to be left out.

6. They should assure that their answers will be kept secret.

<table>
<thead>
<tr>
<th>SA</th>
<th>A</th>
<th>U</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
</table>
3.11 EMOTIONAL INTELLIGENCE SCALE:

The Emotional Intelligence Scale is administered to the respondents related to the behaviour in different situations. By reading the instructions the subjects should give the responses. The responses given by the respondents will be used for the research purpose and kept confidential.

SCORING:

The respondents indicate their responses as following,

- If you strongly agree then write 1
- If you agree then write 2
- If you feel undecided then write 3
- If you disagree then write 4
- If you strongly disagree then write 5

3.12 SOCIAL MATURITYSCALE

The social maturity scale is administered to the respondents in groups in the regular class room situation. The instructions provided on the first page of the scale booklet or self explanatory. Reading of the instructions by the examiner to the group, however, ensures better conditions for responding to the items of the scale. The answers are recorded by the respondents on scale protocol.

The time required to complete the scale items is between 45 minutes and 1 hour. Clarifications sought by respondent regarding any item is to be handled by the examiner through encouraging the respondent in deciding for himself rather than by any suggestions.
### SCORING

**Scoring producer for positive items**

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
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<td>Strongly agree</td>
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</tr>
<tr>
<td>Agree</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scoring producer for Negative items**

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>Score</th>
</tr>
</thead>
<tbody>
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<td>Strongly agree</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>4</td>
</tr>
</tbody>
</table>