



Government of India  
Ministry of Youth Affairs & Sports  
Department of Sports

...

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## **EXPOSURE DRAFT ON NATIONAL PHYSICAL FITNESS PROGRAMME FOR SCHOOL CHILDREN**

Exposure Draft on National Physical Fitness Programme for School Children is put in public domain for inviting suggestions of the all concerned stakeholders and general public. Suggestions may be sent within month. i.e., by 30<sup>th</sup> September 2012 to Shri Onkar Kedia, Joint Secretary (Sports), Ministry of Youth Affairs & Sports, Room No. 103, 'C' Wing, Shastri Bhawan, New Delhi or emailed at [onkar.kedia@nic.in](mailto:onkar.kedia@nic.in).



Exposure Draft  
**National Physical Fitness**  
NATIONAL PHYSICAL FITNESS

**Programme For School Children**

Ministry of Youth Affairs and Sports,  
Government of India





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## EXPOSURE DRAFT ON NATIONAL PHYSICAL FITNESS PROGRAMME FOR SCHOOL CHILDREN.

### 1 Introduction

A fit and healthy person will live longer, be more productive at work and school, and generally contribute more to the country's growth and development. With an increasing prevalence of heart and other cardiovascular diseases as well as a wide range of health concerns, the importance of leading healthy lives that include a well-balanced diet and an adequate fitness regime that embodies healthy lifestyle habits is imperative.

- 1.2 As per The World Health Statistics-2012 report released by WHO, one in three adults worldwide, has raised blood pressure and one in 10 adults has diabetes. Also 12% of the total population are obese. A startling observation of WHO Report-2001, is that major sections of youth (below 25 years) in India are vulnerable to these deadly diseases. In the same Report, WHO also makes a prediction that one out of every three Indians will either be a coronary patient or a diabetic by 2030. This projected population at risk about two decades from now will necessarily be the presently school going children. Given the fact that, majority of our population are in the youth category below the age of 35 years, WHO's prediction for 2030 has to be addressed at the national level urgently.



- 1.3 Apart from the enumerated social implication, the same will also have huge financial implications. As per Report of Working Group on Disease Burden for 12<sup>th</sup> Five Year Plan WG-3(2) : Non Communicable Diseases - Among non-communicable diseases (NCD), Cardio-Vascular Diseases (CVD) account for 52% of mortality. The potentially productive years of life lost (PPYL) due to CVDs in the age group of 35-64 was 9.2 million in 2000 and is expected to rise 17.9 million in 2030 - again comprising of that segment of the population that is in the school going age bracket currently. Since the majority of deaths are premature, there is a substantial loss of lives during the productive years in India as compared to other countries. Heart diseases, stroke and diabetes are projected to increase cumulatively, and India stands to lose (US) **237 billion dollars** during the ongoing decade starting 2005.
- 1.4 Recognizing the importance of sports and physical fitness and close linkages in sports, education and health; sports and physical education form an integral part of a school curriculum to promote all round development of children. The Ministry of Youth Affairs & Sports and the Ministry of Human Resource Development have been continuously emphasizing the significance of sports, games, physical and health education for the overall development of children.
- 1.5 Health, nutrition and fitness are inter-related and require an integrated policy approach. Health has a direct impact on all activities, economic or otherwise. With massive efforts being made to effectively implement the provisions of the Right to Education Act (RTE), 2010, enroll every child below 14 years in school, **it would be best if the health and fitness related schemes are implemented through the organized school system.**



- 1.6 School Health Program, a program for school health service under National Rural Health Mission, intending to cover 12,88,750 Government and private aided schools covering around 22 crore students all over India, focuses to address the health needs of children, both physical and mental, and in addition, it provides for nutrition interventions, yoga facilities and counseling.
- 1.7 Components of School Health Program are screening of general health, assessment of anaemia/nutritional status, visual acuity, hearing problems, dental check up, common skin conditions, heart defects, physical disabilities, learning disorders, behavior problems, referral cards for priority services at District/Sub-District hospitals, immunisation, micronutrient (Vitamin A & IFA) management, De-worming, regular practice of Yoga, Physical education, health education. **It is seen that the School Health Programme is more about general health rather than at improving physical fitness levels of the school going children.**
- 1.8 The RTE Act emphasizes (i) playground for each school; (ii) part-time Instructors for physical education in upper primary schools; and (iii) supply of play materials, games and sports equipment to schools. Apart from this, there exists a massive pool of Physical Training Instructors sanctioned under Sarva Shiksha Abhiyan (SSA) by the Ministry of Human Resource Development.
- 1.9 In this background, the Conference of the Ministers of Youth and Sports of States held on 18.11.2011 unanimously passed the following Resolution:  
“Games and Sports should be introduced compulsorily as part of curriculum of education in schools at all levels both in Centre and States. Further, one period each day should be allocated for Games and Sports in all schools. The students’



participation should be graded and evaluated at par with other subjects and adequate weightage should be given to participation in Games and Sports. This will encourage sports culture and broad-base Games and Sports.”

## 2 Need for Physical Fitness Programme:

- 2.1 There is no dispute or argument on having a Physical Fitness Programme for people of the country covering all sections of the society, starting from school going children to housewives and old people. Physical fitness initially was needed for survival purposes as “**survival of the fittest**” was the dictum. Today physical fitness is the underline paradigm for social as well as economic well being of the country. Physical fitness is all the more important now in view of the technological advancements which have reduced physical activities being performed by individuals to a bare minimum. A stage has now come when adults as well as children are facing diseases which were unheard of by human beings a few years ago. Blood pressure, diabetes, hypertension, heart disease etc. are prevalent in children of the country.
- 2.2 It is imperative in light of various projected health indicators as also the current status of physical well-being that this entire issue is looked at from an essentially positive perspective of physical well being and fitness based on inculcation of physical fitness as a voluntary yet compulsory life chore rather than as a redressable health and disease concern.
- 2.3 Accordingly, there is a need to prepare and formulate a scientific programme and criteria to first motivate and encourage school going children of both sexes to be physically fit and concurrently evaluate their fitness. It has to be realized that the scheme needs to be motivational rather than coercive and to obtain this, the achievement of fitness by a





child has to be rewarded in a manner similar to reward for academic achievement.

### 3 Kerala experience

- 3.1 The physical fitness status of school children in Kerala was not known till 1995. The sample survey conducted by the Directorate of Sports & YA, Govt, of Kerala in Thrissur district showed that the physical fitness standards of the school children was very low and significantly differed with their age and sex when compared to American Alliance Health Physical Education Recreation and Dance (AAHPERD) and Health Related Physical Fitness Test (HRPFT) standards. Moreover, the abdominal strength and endurance of high school girls showed a decreasing trend when compared with that of lower classes. To tackle this social problem, Govt. of Kerala launched the Total Physical Fitness Program (TPFP) in November 2008, as a joint initiative of Departments of Education, Sports, Health and LSG through Kerala State Sports Council for boosting of physical fitness status of Kerala school children. Observations with regard to TTFP launched in Kerala are given in the succeeding paragraphs.
- 3.2 In the academic year 2008-2009, as part of TTFP, health related physical fitness testing was conducted in Kerala state schools in classes' five to nine. A total of 16,28,943 students enrolled in classes five to nine, were administered the Total Physical Fitness Programme: Health Related Physical Fitness Test (HRPFT) in 2008, from 4315 schools representing approximately 73 percent of Kerala State schools. Only 19.61 percent of state school population from classes five to nine was found within the minimum recommended standard on all the test items. During the academic year 2009-10, 23,34,739 students enrolled in classes five to ten, were administered the TPFP HRPFT from 6101 schools representing 91% of Kerala state schools. During that year found that only 14.35% students (1, 98,884 (16.78%) boys and 1,36,189 (11.85%) girls) met the recommended standard on minimum physical fitness. In the year 2010-11,



total of 15,65,609 students enrolled in classes five to ten, only participated in Health Related Physical Fitness Test (HRPFT), from 4583 schools representing approximately 49.18 percent of Kerala State schools. 15.56 percent of state school population from classes' five to ten found within the minimum recommended standard on all the health related physical fitness test items (Boys - 17.89% and Girls-13.23%). Whereas it was only 14% in the previous year (Boys - 16.58% and Girls-11.46%). This shows an increase of 1.56% in overall performance and 1.31% and 1.37% increase in boys and girls respectively.

- 3.3 It is well known that Kerala enjoys a status of a role model of overall-development making it comparable with developed nations of the world in areas such as health, education and other demographic indices. If the physical fitness level of school children in a state like Kerala is not optimum, as revealed from the statistics presented by TFPF, then the corresponding figures for the rest of the states and the national averages are expected to be less than encouraging.

#### 4 Components of Physical Fitness

4.1 The six basic components of physical fitness important for good health are:

- (i) Cardio respiratory endurance,
- (ii) Muscular strength,
- (iii) Muscular endurance,
- (iv) Flexibility,
- (v) Explosive Strength, and
- (vi) Body composition (percentage of body fat).



## 5 Testing Physical Fitness

- 5.1 There is no particular prescribed methodology or fitness regime for assessing the physical fitness. There are many modules or batteries of tests presently in vogue, which are being used by different organizations and States. As already mentioned above, Kerala has developed Total Physical Fitness programme for its school going children. Likewise, Tamil Nadu and Haryana have also developed batteries of tests for assessing fitness levels of the students. Army and Para-military organizations also prescribe the minimum physical fitness standards at the time of recruitment. Sports Authority of India (SAI) has also a battery of tests for induction of athletes in its schemes such as Talent Search Contest (NSTC) Scheme, SAI Training Centre (STC) Scheme, Special Area Games (SAG) Scheme. The schemes and programmes are annexed to this exposure draft.
- 5.2 However, there is no uniform national battery of tests that could be applied and evaluated throughout the country and therefore national quantification of Physical Fitness would require uniform and standard testing parameters as well as grading system.
- 5.3 Physical fitness tests and their dimensions as proposed by this scheme are detailed hereunder:

Test Item	Fitness Dimension Measures
Sit-Ups (number in a minute)	Abdominal strength / endurance
Sit & Reach (cms)	Flexibility and low-back musculoskeletal function
Modified Pull-Up (completed)	Upper body strength and endurance
Mile run (min: sec)	Cardio-respiratory endurance
04x10 mtr Shuttle Run Test	Test of Speed, Body Control and ability to change direction(Agility)
Standing Vertical Jump	Explosive Strength and Power of Legs
Standing Broad Jump	Explosive Strength and Power of Legs and extensibility of Hip muscles
Height (meters) and Weight (kg)	Body Mass Index (Body Composition)



### 5.3.1 SIT -UPS IN 60 SECONDS (KNEES FLEXED)

**Purpose:** The purpose of the sit-up is to evaluate the abdominal muscular strength and endurance.

**Equipment:** Mats or other comfortable surfaces are recommended. Stopwatch or sweep second hand from an electronic wrist watch may be used for timing.

**Test Description:** To assure the starting position, the student lies on his/her back with knees flexed, feet on floor with the hands on the opposite shoulders. The feet are held by partners to keep them in touch with the testing surface. The student, by tightening his/her abdominal muscles, curls to the sitting position. Arm contact with the chest must be maintained. The chin should remain tucked on the chest. The sit-ups are completed when the elbows touch the thighs. To complete the sit-up the student returns to the down position until the mid-back makes contact with the testing surface. When the timer gives the signal "ready go", the sit-up performance should be started and the performance should be stopped on the command "stop". The number of correctly executed sit-ups performed in 60 seconds shall be the score.

**Scoring :** Record the number of correctly executed sit-ups that are completed in sixty seconds.

**Administrative Suggestions:** It is important that the heels are placed at a proper distance (12 to 18 inches) from the buttocks. Teachers may want to use a measuring stick to ensure that the proper distance is maintained. Partners can be used to count and record each other's score, but the supervising tester must carefully observe to ensure that the sit-ups are being done correctly. Be certain that the student feet are in contact with the testing surface. This can be ensured by having the partner hold the feet or ankles.





### 5.3.2 SIT AND REACH TEST (SITTING POSITION)

**Purpose:** The purpose of the sit and reach is to evaluate the flexibility (extensibility) of the low back and posterior thighs.

**Equipment:** The test apparatus consists of a specially constructed box with a measuring scale where 23 cm is at the level of the feet.

**Test Description:** To assume the starting position, the students should be asked to remove their shoes and sit down at the test apparatus with their knees fully extended and the feet, shoulder width apart. The feet should be flat against the end board. The arms are extended forward with the hands placed on top of each other to perform the test. The pupil reaches directly forward, palms down, along the measuring scale four times and holds the position of maximum reach on the fourth trial. The position of maximum reach must be held for one second.

**Scoring:** The score is the farthest distance point reached on the fourth trial measured to the nearest centimeter. The test administrator should remain close to the scale and note the farthest distant point touched the fingertips of both hands. If the fingertips reach unevenly, the test should be re-administered. The tester should place one hand on the subject's knees to ensure that they remain extended.

**Administrative Suggestions:** Proper warm-up is very important for this test. The warm-up should include slow sustained static stretching of the low back and posterior thighs. The test trial is repeated if:



(1) The hands reach out unevenly or (2) The knees are flexed during 1 trial. At the time of doing the test a partner placing his/her hands lightly across knees can prevent the flexing of knees. Besides, in order to prevent the test apparatus from sliding away from the student during the test, it should be placed against a wall or a similar immovable project.

### 5.3.3 MODIFIED PULL-UPS

**Purpose:** The purpose of the Modified pull-ups test is to test the shoulder strength and endurance.

**Equipment:** The test apparatus' consists of a specially constructed horizontal bar that can be positioned at a height that allows the student to clasps the bar with over grasp when lying on the back on a flat surface.

**Test Description:** The horizontal bar should be positioned at a particular height, which is just reachable to a student, who lies on the back flat surface. Then the student should be asked to clasp the horizontal bar with over grasp. When the student is ready, the test leader should give signal "Go". On hearing the signal "go", the subject should start to raise the body by flexing the arm until the chin is pulled up to the level of the horizontal bar. Then the student should lower back to the starting position with shoulders touching the ground, this procedure should be repeated as many times as possible. The test will stop when the student pauses for two or more seconds. The testers should ensure that the subject keeps the knees straight during the test.

**Scoring:** The student's score is the number of correctly executed pull-ups.





**Administrative Suggestions:** The core groups should make improvisation of equipment for the safe and proper conduct of the test. Mats can be used for more comfortable execution of the test.

#### 5.3.4 ONE MILE RUN (1600 METERS)

**Purpose:** The purpose of the one-mile run is to measure maximal functional capacity and endurance of the cardio-respiratory system

**Equipment:** One mile run can be administered on a 400 metre or 200 metre or on any other flat, measured area.

**Test Description:** Students are instructed to run one mile in the fastest possible pace. The students begin on signal, "ready, start" as they cross the finish line elapsed time should be announced to the participants. Walking is permitted, but the objective is to cover the distance in the shortest possible time.

**Scoring:** The one-mile run is scored to the nearest of a second and the performance should be recorded on the individual score card.

**Administrative Suggestions:** In order to obtain valid and reliable results, students should be adequately prepared for the test. First, assurance should be obtained so that no children with known medical problems, which would contraindicate vigorous exercise, are allowed to take part in the test. Secondly, students should be allowed to practice distance running with emphasis placed on the concept of pace. Most uninstructed children will run too fast early in the test and then be forced to walk during the later stages. Results are usually better if the child can maintain constant pace during most of the run, walking for short periods of time only if necessary, and perhaps using a strong closing effort. Thirdly, students should be properly motivated.





Does the participant provide only as good as effort this test, like any other Physical Education tests. The purpose of the test should be fully explained to the students.

### 5.3.5 04x10 mtr Shuttle Run Test

**Purpose:** This purpose is to test of speed, body control and the ability to change direction (agility).

**Equipment:** Equipment required are two wooden blocks for each runner (each block should measure 10x5x5 cm), marker cones or marking tape, measurement tape, stopwatch, flat non-slip surface, with two lines 10 meters apart.

**Test Description :** Mark two lines 10 meters apart using marking tape or cones. The two blocks are placed on the line opposite the line they are going to start at. On the signal "ready", the participant places their front foot behind the starting line. On the signal, "go!" the participant sprints to the opposite line, picks up a block of wood, runs back and places it on or beyond the starting line. Then turning without a rest, they run back to retrieve the second block and carry it back across the finish line. Two trials are performed.

**Scoring:** Record the time to complete the test in seconds to the nearest one decimal place. The score is the better of the two times recorded.

**Administrative Suggestions:** A trial is void if a block is dropped or thrown. The blocks should be placed at the line, not thrown across them. Also make sure the participants run through the finish line to maximize their score. In addition to running speed, turning technique and coordination are also significant factors in this test.

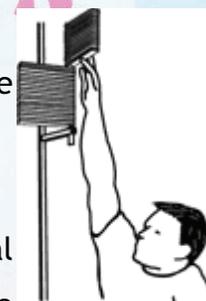




### 5.3.6 Standing Vertical Jump

**Purpose :**The purpose of standing vertical jump is to measure the explosive power of the legs muscles and extensibility of hip muscles.

**Equipment :** Test equipment required are a measuring tape, several pieces of chalk, and a smooth wall surface of at least 12 feet from the floor.



**Test Description :** The performer should stand with one side toward a wall, heel together, and hold a small piece of chalk in the hand nearest to the wall, keeping the heels on the floor, he should reach upward as high as possible and make a mark on the wall. The performer then jumps as high as possible and makes another mark at the height of his jump.

**Scoring:** The distance between the reach and the jump marks is the score. Three attempts are allowed and the best attempt is recorded as the score.

**Administrative suggestions :** Proper warm with several easy jumps followed with few minus of rest is essential.

### 5.3.7 Standing Broad Jump

**Purpose:** The purpose of standing broad jump is to measure the explosive power of the legs muscles.

**Equipment:** Test equipment consists of tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. The take off line should be clearly marked.

**Test Description:** The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the





arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed.

**Scoring :** The score is the maximum distance covered in any one of the three attempts.

**Administrative suggestions:** Proper warm with several easy jumps followed with few minutes of rest is essential.

### 5.3.8 Body Composition

Height measured to the nearest cm (recorded in meters) and weight will be recorded to the nearest 0.5 kg

**Scoring:** BMI can be calculated by formula  $BMI = \text{weight} / (\text{height} * \text{height})$

BMI HFZ								
BOYS	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
BMI	14 -18	14.5-18.5	15 -19	15.5-21	16 -21.5	16.5-21.5	17 - 22	17.5-22.5

BMI HFZ								
GIRLS	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
BMI	13-23	13.5-23.5	14-24	14.5-24.5	15-25	15.5-25.5	16-26	16.5-26.5

## 6 Periodicity of testing

The fitness tests need to be executed at least two times in a year i.e., in the month of June and January of academic session, which will provide an idea





regarding present status as well as improvement of physical fitness during academic session of the student.

## 7 Marking and Grading

- 7.1 The National Physical Fitness Programme envisages that every school going child studying in class V and above, should be evaluated on the above mentioned six components of physical fitness by being made to participate and compete in the enumerated eight measurable fitness tests. The student's performance is accordingly graded and fed into the child's 'Assessment Card' and the school's 'Fitness Assessment Forms' as designed by the Lakshmbai National University for Physical Education (LNUPE), Gwalior. Subsequent collection & collation from across the schools shall be done at the level of the District and grades allotted to every child on the basis of percentile system for marking & grading.
- 7.2 The students shall undergo these eight tests on two pre-determined dates in the months of January and June every year. While the conduct of these tests and their evaluation could be done by suitably trained internal personnel/staff during the child's non Board years, the same shall be entrusted to external observers/examiners in the years in which the child is taking his class X/XII Board exams.
- 7.3 The enabling administrative provisions as also implementing manpower shall be provided by the concerned State Governments as enumerated in para 9.0 further. The scores/grades achieved by every child shall be enumerated in print on standardised 'Assessment Cards and Fitness Assessment Forms' prepared by LNUPE, Gwalior.



- 7.4 After collection and collation of data at the district level, as outlined at para 7.1, the same shall be linked to the Central Server administered by the LNUPE through the Core Application Software (CAS) supplemented by System Integrators.
- 7.5 Setting up of a Knowledge Resource Centre is of paramount importance, as its role will be very critical in working out and developing age specific, gender specific and region specific physical fitness parameters, collection and analysis of data with regard to physical fitness standards and re-working of the physical fitness norms, if necessary on the basis of data collated during implementation and the initial few years.
- 7.6 Knowledge Centre will be set up at Gwalior within the premises of the LNUPE, so that it can have close linkages with the University, which has already done a lot of work in this field. Apart from being the data base, the Knowledge Centre will be a research and development unit for working out physical fitness norms, suggesting fitness modules, giving its suggestions for implementing agencies for effective implementation of the programme.

## **8 Motivation and Rewards**

- 8.1 The top 10 percentage of gender wise performers in each district in the battery of tests indicated above shall be given an additional 3% to the percentage obtained by him/her in academic disciplines. Subsequently, performers between top 10 to 20 percentage will get additional 2.5 %, performers between 20 to 30 percentage will get 2%, between 30 to 40 percentage will get 1.5% and between 40 to 50 percentage will get additional 1% weightage in their marking which may be converted into grades as per prevalent norms.

- 8.2 In India the concept of nation-wide implementation of Physical Fitness programme was initiated during 1959 and the then Ministry of Education and Social Welfare, Govt. of India had developed a test battery “National Physical Efficiency Drive” (NPED) for inculcating awareness of Physical fitness among the people. The level of physical efficiency was then assessed and graded by awarding “Star system” (i.e. 3 stars, 2 stars etc.) **However, the programme was discontinued as it was based on inappropriate and inaccurate assessment of physical fitness norms.** This scheme of grading should be revived by providing for giving 5 STARS to the children amongst the top 10 percent, 4 STARS to the next 10 percent and so on in a descending order.
- 8.3 In the present proposal marks and grades are linked to the academic performance and fruits thereof. It is felt that if fitness level is linked to academic excellence; it will motivate the students and the parents alike, to strive for it. Care has also been taken to ensure that an over-riding pan Indian or even state-wide standard is not adopted in working out the grading system. By adopting a district specific percentile system, it is ensured that unfair advantage is not given to any region or district in the country.
- 8.4 It is proposed that six National Physical Fitness Awards may be constituted and awarded by the President of India at the Annual National Sports Day function. The awards may be in the category of Best Performing State, District and School as also for the State, District and School that has improved the most during the last one year.



**9 Developing Physical Fitness Standards for differently abled students including mentally challenged children and youth and implementation strategy thereof.**

9.1 Physical fitness for differently-abled persons is as important for them as it is for able bodied persons. Components for adjudging physical fitness for them are more or less the same viz., cardio respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition (percentage of body fat). But their physical fitness tests need to be decided keeping in view the kinds of disability they suffer from. In the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, seven types of disabilities have been defined. It is proposed that a Committee of Experts may be set up to recommend physical fitness parameters, marking & grading and motivation/rewards for differently-abled persons.

**10 Implementation Strategy and Distribution of Responsibility**

10.1 It is proposed that a tripartite agreement between the stake holders - State Governments, Central Government and the Lakshmibai National University for Physical Education, Gwalior be put into place for implementation of the National Physical Fitness Programme for School Children.

**Distribution of responsibilities amongst the stake holders**

**Lakshmibai National University of Physical Education (LNUPE)**

- Location of centre server connected to District Education Officers in the entire country.
- Creation and Design of a Core Application Software (CAS) with System Integrators (SI)
- Device and Monitor quantifiable Physical Fitness parameters/tests
- Have international linkages to keep abreast with latest developments
- Facilitate Tripartite agreement between the stake holders.



- To prepare standardized 'Assessment Cards' and 'Fitness Assessment Forms' for every school to be filled and handed over at the District Headquarter.
- To identify talent on the basis of marks/sports at all the levels

### State Governments

- Facilitate the National Physical Fitness Programmes in Schools
- Ensure timely conduct of Physical Fitness appraisals/exams in schools
- Ensure availability of adequate level and number of personnel from State Police/Other State Govt departments which have personnel from Sports Quota.

### Union Government

- HRD Ministry to ensure compliance in all CBSE schools
- HRD Ministry to initiate the recognition of Physical Fitness Induces Grades/marks in Higher Education Institutes under its domain.
- Sports Ministry - Give Policy directions to the entire programme
- Sports Ministry - To constitute Award Systems at National level for recognition of schools/districts and States along with individuals
- Sports Ministry through SAI conduct Battery of Tests including Anthropometry and adopt talent youngsters in suitable sports disciplines to impart best possible training at STC, SAG Centres.

## 11 Talent Identification through physical fitness tests:

- 11.1 Physical fitness tests will also serve as important source for spotting talent. School children doing exceeding well in physical fitness tests will be identified and nurtured under the various residential and non-residential schemes of the Sports Authority of India (SAI) such as National Talent Search Contest (NTSC) Scheme, SAI Training Centre (STC) Scheme, Special Area Games Scheme etc.

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## Total Physical Fitness Programme (TPFP) Health Related Physical Fitness Test of Kerala:

The following are the battery of tests conducted under TPFP:

Test Item	Fitness Dimension Measures
Sit-Ups (number in a minute)	Abdominal strength / endurance
Sit & Reach (cms)	Flexibility and low-back musculoskeletal function
Modified Pull-Up (completed numbers)	Upper body strength and endurance
1 Mile run (min: sec)/ 20m Shuttle Run Test (Levels/ Shuttle)	Cardio-respiratory endurance
Height (meters) and Weight (kg)	Body Mass Index (Body Composition)

### 1. SIT -UPS IN 60 SECONDS (KNEES FLEXED)

**Purpose:** The purpose of the sit-up is to evaluate the abdominal muscular strength and endurance.

**Test Description:** To assure the starting position, the students' lies on his/her back with knees flexed, feet on floor with the hands on the opposite shoulders. The feet are held by partners to keep them in touch with the testing surface. The student, by tightening his/her abdominal muscles, curls to the sitting position. Arm contact with the chest must be maintained. The chin should remain tucked on the chest. The sit-ups are completed when the elbows touch the thighs. To complete the sit-up the student returns to the down position until the mid-back makes contact with the testing surface. When the timer gives the signal "ready go", the sit-up performance should be started and the performance should be stopped on the command "stop". The number of correctly executed sit-ups performed in 60 seconds shall be the score.

**Equipment and Facilities:** Mats or other comfortable surfaces are recommended. Stopwatch or sweep second hand from an electronic wrist watch may be used for timing.

**Scoring:** Record the number of correctly executed sit-ups that are completed in sixty seconds.



**Administrative Suggestions:** It is important that the heels are placed at a proper distance (12 to 18 inches) from the buttocks. Teachers may want to use a measuring stick to ensure that the proper distance is maintained. Partners can be used to count and record each other's score, but the supervising tester must carefully observe to ensure that the sit-ups are being done correctly. Be certain that the student feet are in contact with the testing surface. This can be ensured by having the partner hold the feet or ankles.

## 2. SIT AND REACH TEST (SITTING POSITION)

**Purpose:** The purpose of the sit and reach is to evaluate the flexibility (extensibility) of the low back and posterior thighs.

**Test Description:** To assume the starting position, the students should be asked to remove their shoes and sit down at the test apparatus with their knees fully extended and the feet, shoulder width apart. The feet should be flat against the end board. The arms are extended forward with the hands placed on top of each other to perform the test. The pupil reaches directly forward, palms down, along the measuring scale four times and holds the position of maximum reach on the fourth trial. The position of maximum reach must be held for one second.

**Equipment:** The test apparatus consists of a specially constructed box with a measuring scale where 23 cm is at the level of the feet.

**Scoring:** The score is the farthest distance point reached on the fourth trial measured to the nearest centimeter. The test administrator should remain close to the scale and note the farthest distant point touched the fingertips of both hands. If the fingertips reach unevenly, the test should be re-administered. The tester should place one hand on the subject's knees to ensure that they remain extended.

**Administrative Suggestions:** Proper warm-up is very important for this test. the warm-up should include slow sustained static stretching of the low back and posterior thighs. The test trial is repeated if : (1) The hands reach out unevenly or (2) The knees are flexed during 1 trial. At the time of doing the test a partner placing his/her hands lightly across knees can prevent the flexing of knees. Besides, in order to prevent the test apparatus from sliding away from the student during the test, it should be placed against a wall or a similar immovable project.



### 3. MODIFIED PULL-UPS

**Purpose:** The purpose of the Modified pull-ups test is to test the should strength and endurance.

**Test Description:** The horizontal bar should be positioned at a particular height, which is just reachable to a student, who lies on his/her back flat surface. Then the student should be asked to clasp the horizontal bar with over grasp. When the student is ready, the test leader should give the signal "Go". On hearing the signal "go", the subject should start to raise the body by flexing the arm until the chin is pulled up to the level of the horizontal bar. Then the student should lower back to the starting position with shoulders touching the ground, this procedure should be repeated as many times as possible. The test will stop when the student pauses for two or more seconds. The testers should ensure that the subject keeps the knees straight during the test.

**Equipment:** The test apparatus' consists of a specially constructed horizontal bar that can be positioned at a height that allows the student to clasps the bar with over grasp when lying on the back on a flat surface.

**Scoring:** The student's score is the number of correctly executed pull-ups.

**Administrative Suggestions:** The core groups should make improvisation of equipment for the safe and proper conduct of the test. Mats can be used for more comfortable execution of the test..

#### 4.1. ONE MILE RUN (1600 METERS)

**Purpose:** The purpose of the one-mile run is to measure maximal functional capacity and endurance of the cardio-respiratory system.

**Test Description:** Students are instructed to run one mile in the fastest possible pace. The students begin on signal, "ready, start".as they cross the finish line, elapsed time should be announced to the participants. Walking is permitted, but the objective is to cover the distance in the shortest possible time.

**Equipment and Facilities:** One mile run can be administered on a 400 meter or 200 meter or on any other flat, measured area.

**Scoring:** The one-mile run is scored to the nearest of a second and the performance should be recorded on the individual score card.





**Administrative Suggestions:** In order to obtain valid and reliable results, students must be adequately prepared for the test. First, assurance should be obtained so that no children with known medical problems, which would contraindicate vigorous exercise, are allowed to take part in the test. Secondly, students should be allowed to practice distance running with emphasis placed on the concept of pace. Most uninstructed children will run too fast early in the test and then be forced to walk during the later stages. Results are usually better if the child can maintain constant pace during most of the run, walking for short periods of time only if necessary, and perhaps using a strong closing effort. Thirdly, students should be properly motivated. Does the participant provide only as good as effort this test, like any other Physical Education tests. The purpose of the test should be fully explained to the students.

#### 4.2 Multistage Fitness Test / 20m Shuttle Run Test /Bleep Test/ Beep test (Optional test for cardio-respiratory endurance)

**Purpose:** The purpose of the one-mile run is to measure maximal functional capacity and endurance of the cardio-respiratory system.



**Test Description:** The 20m multistage fitness test is a commonly used maximal running aerobic fitness test. It is also known as the 20 meter shuttle run test, beep or bleep test among others. This test involves continuous running between two lines 20m apart in time to recorded beeps. For this reason the test is also often called the 'beep' or 'bleep' tests. The test subjects stand behind one of the lines facing the second line, and begin running when instructed by the audio command from cd. The speed at the start is quite slow. The subject continues running between the two lines, turning when signalled by the recorded beeps. After about one minute, a sound indicates an increase in speed, and the beeps will be closer together. This continues each minute (level). If the line is not reached in time for each beep, the subject must run to the line turn and try to catch up with the pace within 2 more 'beeps'. Also, if the line is reached before the beep sounds, the subject must wait until the beep sounds. The test is stopped if the subject fails to reach the line.

(within 2 meters) for two consecutive ends. There are several versions of the test, but this commonly used version has an initial running velocity of 8.5 km/hr, which increases by 0.5 km/hr each minute. Advantages: Large groups can perform this test all at once for minimal costs. Also, the test continues to maximum effort unlike many other tests of endurance capacity. Disadvantages: Practice and motivation levels can influence the score attained, and the scoring can be subjective. As the test is often conducted outside, the environmental conditions can affect the results. Other considerations: The recording is available on compact disc with Malayalam narration, which does not require such a stringent calibration, but should also be checked occasionally.

**Equipment / Facilities:** Flat, non-slip surface, marking cones, 20m measuring tape, beep test cd, cd player, recording sheets.

**Scoring:** The athlete's score is the level and number of shuttles (20m) reached before they were unable to keep up with the recording. Record the last level completed (not necessarily the level stopped at).

## 5. Body Composition

Height measured to the nearest cm (recorded in meters) and weight will be recorded to the nearest 0.5 kg

**Scoring:** BMI can be calculated by formula  $BMI = \text{weight} / (\text{height} * \text{height})$

BMI HFZ								
BOYS	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
BMI	14 -18	14.5-18.5	15 -19	15.5-21	16 -21.5	16.5-21.5	17 - 22	17.5-22.5

BMI HFZ								
GIRLS	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
BMI	13-23	13.5-23.5	14-24	14.5-24.5	15-25	15.5-25.5	16-26	16.5-26.5

## AWARD SYSTEM: TPF

An award system is developed to give recognition to boys and girls, who have demonstrated by performance that they have attained certain levels of Health Related Physical Fitness. The standards for the four award levels are based on the norms developed in accordance with the standard of the students in Kerala State. The awards will be in the form of medals to be worn on shirts and certificates. Moreover each individual will receive the graphic output of their performance. A cash award of Rs.10,000/- and a memento will be given to one school each in boys and girls section separately irrespective of the age groups in each district. A cash award of Rs.10,000/- and a memento will be given to





one Panchayath in each district, one municipality and one corporation at state level by calculating the total points scored by boys and girls in their locality in relation with total number of students participated.

Performances are then compared to a chart and the grades from A to F for each test item. A constitutes excellent performance and E constitutes barely passing. An F grade is an alternate term that the participant has failed to achieve Grade” E”.

The awards are:

**Minimum Proficiency Requirements**

- At least an E grade performance in all 4 test items

**Bronze Proficiency Requirements**

- At least an D grade performance in all 4 test items AND
- Between the recommended score in BMI

**Silver Proficiency Requirements**

- At least a C grade performance in all 4 test items AND
- Between the recommended score in BMI

**Gold Proficiency Requirements**

- At least a B grade performance in all 4 test items AND
- Between the recommended score in BMI

**Champ Proficiency Requirements**

- At least a “A” grade performance in all 4 test items AND
- Between the recommended score in BMI

The 'and' cannot be misinterpreted as an 'or'; no matter how high the candidate's other grades are, his/her proficiency will be determined by his/her *lowest* grade. For example, if someone scores three As and one E, that person will still fail his/her TFPF test score despite the fact that he/she performed excellently in all the other stations, leading to a retest of that particular station which is usually effected three to four months after the test.



### GRADE SYSTEM FOR BOYS

#### 1.6Km Run/Walk (min:sec)

Boys	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	8:00	7:40	7:20	7:00	6:50	6:30	6:26	6:20
B	8:10	8:05	8:00	7:45	7:30	7:15	7:00	6:50
C	8:40	8:20	8:10	8:00	7:50	7:30	7:20	7:10
D	10:00	9:50	9:40	9:30	9:10	8:50	8:40	8:30

#### 20m Shuttle Run Test (Level & Shuttle)

Boys	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	8-11	8-11	8-11	9-11	9-11	10-11	10-11	11-12
B	7-10	7-10	7-10	8-11	8-11	9-11	9-11	10-11
C	6-10	6-10	6-10	7-10	7-10	8-11	8-11	8-11
D	3-8	3-8	4-9	5-9	5-9	6-10	7-10	7-10

#### Sit-Ups (Numbers completed in 1 min)

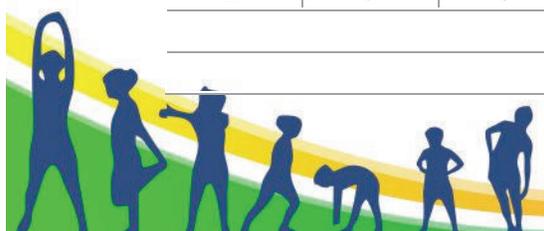
Boys	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	40	43	46	48	50	52	55	55
B	32	33	39	41	42	44	45	45
C	28	29	35	36	38	40	41	41
D	12	15	18	21	24	24	24	24

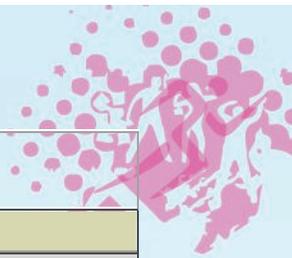
#### Sit & Reach ( in cm)

Boys	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	30	31	31	33	36	37	38	41
B	28	29	29	31	34	35	36	38
C	25	25	26	26	28	30	30	34
D	20	20	21	21	21	21	21	21

#### Modified Pull-Ups (in numbers)

Boys	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	20	22	24	27	30	32	35	35
B	15	17	19	22	25	27	30	30
C	12	13	13	15	16	19	20	20
D	5	6	7	8	9	10	12	14





### GRADE SYSTEM FOR GIRLS

#### 1.6Km Run/Walk (min:sec)

Girls	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	8:45	8:25	8:10	8:00	7:55	7:50	7:45	7:50
B	9:20	9:00	8:40	8:20	8:00	8:10	8:05	8:00
C	9:30	9:20	9:10	9:00	8:55	8:45	8:35	8:30
D	11:20	11:15	11:05	10:30	10:05	10:00	10:30	10:20

#### 20m Shuttle Run Test (Level & Shuttle)

Girls	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	5-9	6-10	6-10	7-10	7-10	8-11	8-11	8-11
B	4-9	5-9	5-9	6-10	6-10	7-10	7-10	7-10
C	3-8	4-9	4-9	5-9	5-9	6-10	6-10	6-10
D	2-8	3-8	3-8	4-9	4-9	5-9	5-9	5-9

#### Sit-Ups (Numbers completed in 1 min)

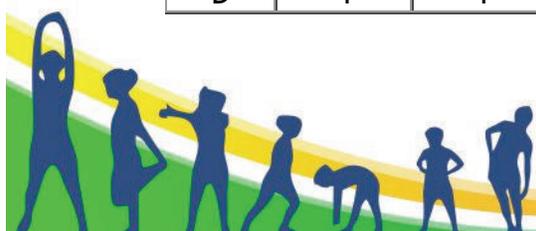
Girls	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	28	32	36	38	40	42	44	44
B	25	28	32	34	36	38	40	40
C	20	22	26	28	30	32	34	34
D	12	15	18	18	18	18	18	18

#### Sit & Reach ( in cm)

Girls	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	33	34	36	38	40	43	42	42
B	29	30	32	34	36	39	38	38
C	26	27	29	31	33	36	35	35
D	21	25	25	25	25	30	30	30

#### Modified Pull-Ups (in numbers)

Girls	Age 10	Age 11	Age 12	Age 13	Age 14	Age 15	Age 16	Age 17+
A	19	20	20	21	21	24	24	24
B	15	16	16	17	17	20	20	20
C	11	12	12	13	13	17	17	17
D	4	4	4	4	4	4	4	4



## REMEDIAL PROGRAMMEME

All the students not qualified for the minimum fitness proficiency certificate (Grade E) need to undergo a remedial programme. The programme will suggest individualized exercise prescription for each student considering the deficient in criterion fitness measures in consultation with the Medical Officer. A hand book for inculcate physical activity as a lifetime behaviour will be prepared with details of suitable type of activities and necessary directions for motivating the students to attain minimum fitness award next time. The concerned physical education teachers will be provided sufficient training and materials for assisting the students.

## FOLLOW-UP PROGRAMMEME- TALENT IDENTIFICATION AND DEVELOPMENT

A follow-up programme for talent identification and development also an indispensable part of this mega event. Necessary directions and feedback will be given to the physical education teachers of the concerned schools to impart training and special care to student recipients of state fitness awards. The physical education teachers can able to help them to find out suitable sports discipline. A special camp for those award recipients will be conducted in each Panchayath / Municipality / Corporation level with help of Kerala State Sports Council during summer vacation. Another camp under the direct supervision of Kerala State Sports Council will conducted for recipients of Champ award. Activity Guide: Secondary Level and Teachers Guide: Physical Education for Lifelong Fitness also will be prepared as part of the programme to provide the resources for teachers.



SPORTS AUTHORITY OF INDIA

BATTERY OF TESTS

MOTOR QUALITY TESTS

6 × 10M SHUTTLE RUN

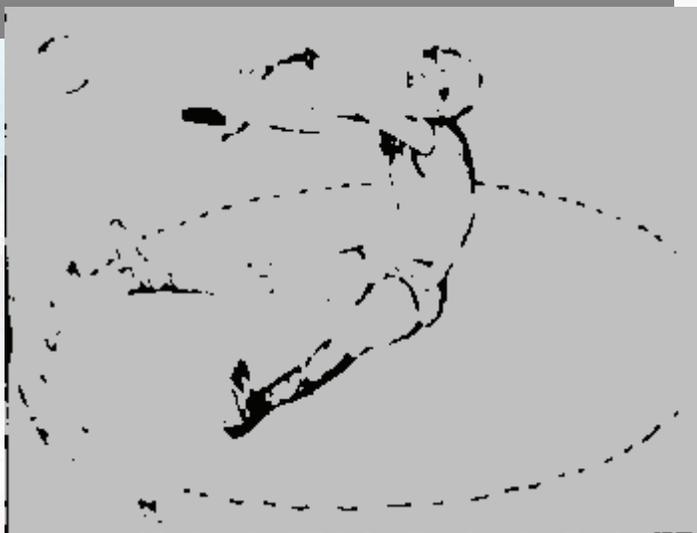


- Test Aim:** To test the agility of the subject.
- Equipment:** Stop watch, Lime powder
- Making :** 10 metres of distance is marked by two parallel lines of 5 metres each.
- Procedure:** The participant stands behind the starting line. On getting starting signal, he runs faster, goes nearest to the other line and touches it with hand (See Figure), turns and comes back to starting line, touches it with hand, turns and repeat it for a total of 6 times.
- Scoring :** The time taken by to complete the course of 6×10 metres to the nearest 1/10 of a second is recorded as score of the test.  
Only one chance is given.
- Note:**
1. Participants are not allowed to use spikes.
  2. Area where test is conducted should be firm and non slippery.





## BALL THROW

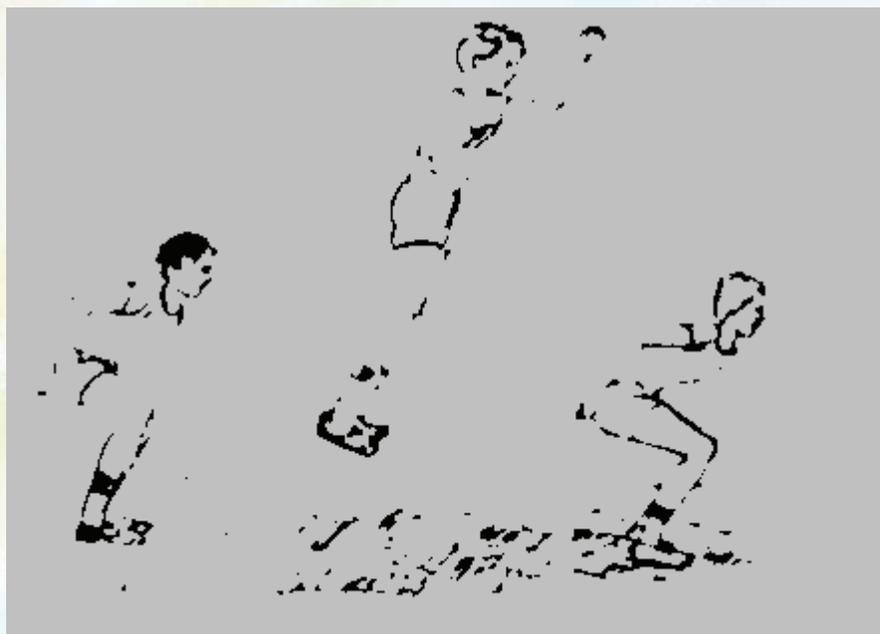


- Test Aim:** To measure the arm strength and upper body coordination.
- Equipment:** Shot put circle with toe board, 400 grams Mini Basketball and measuring tape.
- Procedure:** The participant sits in the centre of the circle assuming straddle sitting position (Leg extended and apart). Holds the mini Basketball by both the hands and holds it behind and over head by flexing elbows. With simultaneous extension of elbows and forward swing of upper body the ball is thrown in forward direction as far as possible. Three chances are given to each participant.



Scoring : The distance is measured in Centimeters from the centre of the circle to the point where the ball lands first.

### STANDING BROAD JUMP



- Test Aim: To measure the explosive strength of the Leg.
- Equipment : (1) Steel Measuring tape (2) Long Jump Pit or and Sand Pit (3) Take Off Board or Lime Marking, Sand in the pit and the take off area should be in one level.
- Marking : A line is marked near the edge of the jumping pit in case take off board is not available.
- Procedure : The participant stands behind the take of line with feet together flexes the knees, takes arms back, raising the heels a little and alongwith a vigorous forward and upward arm swing he extends the knees and jump in to the pit to cover the maximum horizontal distance.
- Recording : (a) Three chances are given and the best performance is considered for points.  
(b) The distance covered in centimeters between the inner edge of the take off line and the nearest landing mark is measured.



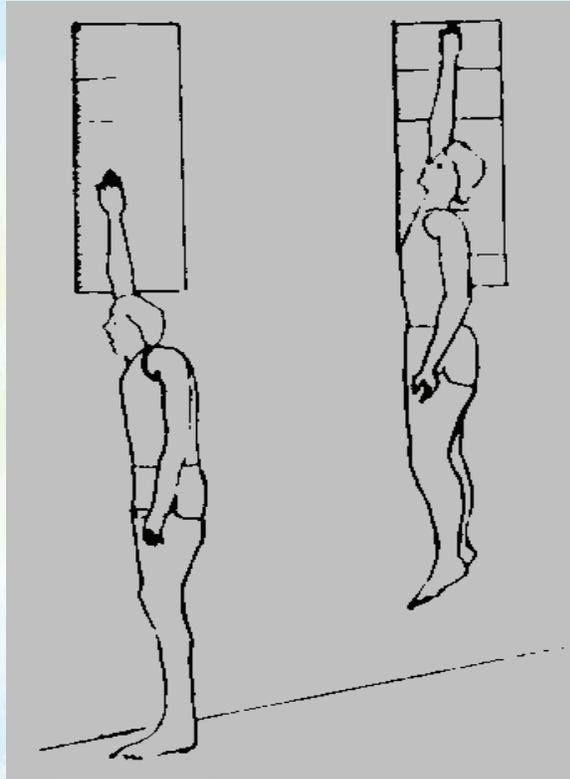
## 800 METERS RUN

- Test Aim:** To measure the endurance.
- Equipment :** Stop Watches.
- Marking :** 400 metres distance is marked with 2 straight and 2 curves on the field or on a 400 metres track.
- Procedure :** Participant stands behind the starting line. On getting starting signal they start running and completes the distance.
- Note:**
1. Participants are not allowed to run with spikes.
  2. It can be conducted on a straight course if the 400m track or area to mark the 400m are not available.

## VERTICAL JUMP

- Test Aim:** To test the explosive strength of the Leg and extensibility of hip muscles.
- Equipment :** Duster, Chalk Powder, measuring tape, Chair and a bench.
- Marking :** A vertical wall is prominently marked in centimeters upto 3.25 metres.
- Procedure :** The performer dips his/her fingers in chalk powder and stands side wise against the wall keeping the arm raise above the head and clap the extended hand marked with chalk on fingers straight. Then jumps as high up as possible and touch the wall. The reading shall be noted by keeping eyes in level with the chalk mark on the graduated marking.
- Scoring :** The standing reach is subtracted from the jumping reach. Three chances are given. Best jump is considered for points.





### 30 METERS RUN (FLYING START)

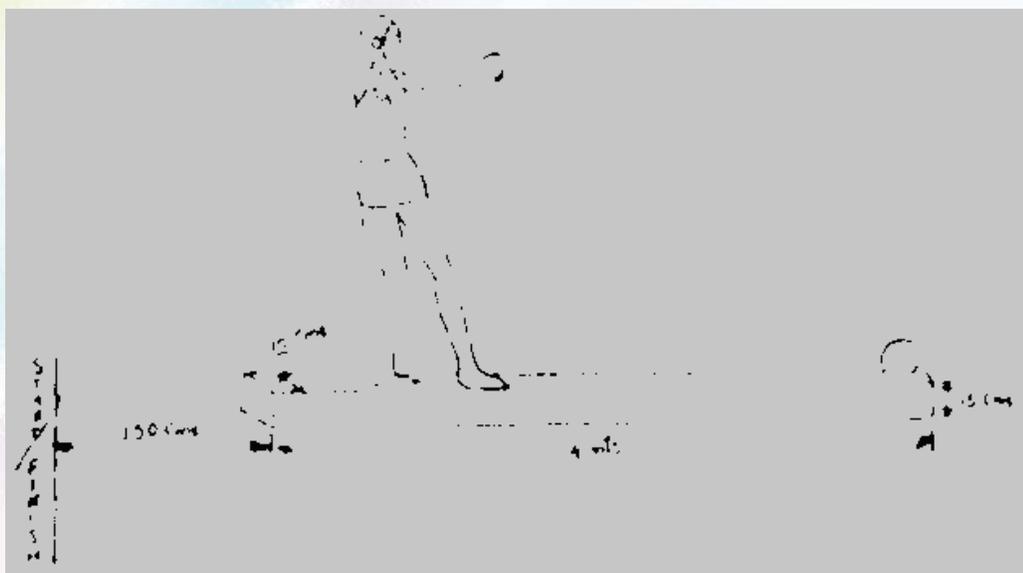
- Test Aim:** To measure the maximum speed.
- Equipment :** Stop watch (1/10 of a second) and six flag posts. 45 metre running strip, Measuring tape.
- Marking :** 45 metre distance is divided into two zones. 15 metres one zone (FA) and the other of 30 metres (AB). Take radius of 30 metres and mark an arc from point A. Mark another arc of 30 metres from point B and intersecting at point C. Join CA and extend to E and join CB and extend to D. Fix flags at all these six points A, B, C, D, E & F.
- Note :**
1. Participants are not permitted to run with spikes.
  2. Running area where test is conducted should have firm surface and non slippery.





## BALANCING TEST

- Test Aim:** To test the Balancing Ability.
- Equipment:** (1) 2 Kg medicine ball (2) a balancing beam (Wood piece) of 4 mtrs. Length, 10cms width, 15cms.High (3) Volleyball.
- Procedure:** The participant stands on the start line 1.5m away from end of the beam, holding a Volleyball on the palm of the hand full stretched out in front hold the right ear with the left hand by bringing left hand below the right hand on signal, the participant moves as fast as possible on the beam pushes the medicine ball kept on the other end of the beam; turns around and tries to reach the start line as quickly as possible.





## ANTHROPOMETRIC MEASUREMENTS

### HEIGHT

- Test Aim:** To measure the standing height.
- Equipment :** Height measuring stand
- Procedure :** The subject stand erect bare footed with heels, posterior thoracic region and back of the head touching the stand of height measuring device or the wall where marking is done.
- Scoring:** The measurement is taken to the nearest centimeter.

### WEIGHT

- Test Aim:** To assess the body mass.
- Equipment :** Standard weighing machine.
- Recording :** The weight is recorded from the indicator dial of the machine in Kgs.
- Procedure :** Participant stands erect on the weighing machine bare footed with feet parallel, weight equally distributed on both the feet. Minimum clothes worn (vest and shorts in case of Boys. Shirt/ Blouse and Shorts/ Skirt in case of Girls)



## SPECIFIC SKILL TESTS

### ATHLETICS

#### TEST NO.1: 60 METRES SPRINT

**Procedure:** Two lines (one starting line and another finishing line) are to be marked at a distance of 60 metres either on the Athletic Track or on the open field. It is suggested to test two participants at a time. Starter standing behind the start line. Two time keepers stand on either side of the finish line with a stop watch for each. The participants assume standing start position behind the starting line without touching the line. The starter gives the start with a wooden clapper held in both hands raised over head or use the palms as clapper. Time keeper start their watches. As soon as the concerned subject crosses the finish line, the time keeper will stop the watch and note the time to the accuracy of 1/10<sup>th</sup> of a second. Each subject will be given three attempts.

Each subject will be given 45 seconds rest between the trials. The best of three timings is considered for evaluation.

Scores	Boys	Girls
<b>10 years</b>		
3 points	9.8 sec. and less	10.2 sec. and less
2 points	9.9 sec. to 10.1 sec.	10.3 sec. to 10.5 sec.
1 points	10.2 sec to 10.4 sec.	10.6 sec. to 10.8 sec
<b>11 years</b>		
3 points	9.6 sec. and less	10.0 sec. and less
2 points	9.7 sec. to 9.9 sec.	10.1 sec. to 10.3 sec.
1 points	10.0 sec to 10.3 sec.	10.4 sec. to 10.6 sec
<b>12 years</b>		
3 points	9.2 sec. and less	9.6 sec. and less
2 points	9.3 sec. to 9.5 sec.	9.7 sec. to 10.0 sec.
1 points	9.6 sec. to 9.9 sec.	10.1 sec. to 10.2 sec
<b>13 years</b>		
3 points	9.00 sec. and less	9.4 sec. and less
2 points	9.1 sec. to 9.4 sec.	9.5 sec. to 9.8 sec.
1 points	9.5 sec to 9.7 sec.	9.9 sec. to 10.1 sec
<b>14 years</b>		
3 points	8.8 sec. and less	9.2 sec. and less
2 points	8.9 sec. to 9.1 sec.	9.3 sec. to 9.6 sec.
1 points	9.2 sec to 9.3 sec.	9.7 sec. to 9.9 sec

## TEST NO.2 : 300 METERS RUN

Procedure: Athletic track of 400m, 300m or 200m or Football Field or similar area can be utilized to conduct this test. This test can be conducted on a straight course.

It is possible to test as many as dozen individuals at a time in this test. The subject has to assume a standing start. The starter to start the heat will either use a wooden clapper or his/her both hands raised over head and clap. The Time Keeper for each subject position themselves at the finish line and will start their watches simultaneous to the starter's signal. The Time Keeper stop the watch, the moment the assigned subject (runner) crosses the finish line, the time will be noted the accuracy of 1/10 of a second.

Scoring	Boys	Girls
<b>10 years</b>		
3 points	62.2 sec. and less	66.5 sec. and less
2 points	62.6 sec. to 65.9 sec.	66.6 sec. to 69.0 sec.
1 points	66 sec. to 67.5 sec.	69.1 sec. to 71.5 sec
<b>11 years</b>		
3 points	58.5 sec. and less	62.5 sec. and less
2 points	58.6 sec. to 61.0 sec.	62.6 sec. to 65.0 sec.
1 points	61.1 sec. to 63.5 sec.	65.1 sec. to 67.5 sec
<b>12 years</b>		
3 points	54.5 sec. and less	58.5 sec. and less
2 points	54.6 sec. to 57.0 sec.	58.6 sec. to 61.0 sec.
1 points	57.1 sec. to 59.5 sec.	61.1 sec. to 63.5 sec
<b>13 years</b>		
3 points	50 sec. and less	52 sec. and less
2 points	50.1 sec. to 55.0 sec.	53.1 sec. to 58 sec.
1 points	57 sec. to 55.1 sec.	58.1 sec. to 61 sec
<b>14 years</b>		
3 points	48 sec. and less	54 sec. and less
2 points	48.1 sec. to 50 sec.	54.1 sec. to 55 sec.
1 points	50.1 sec. to 53 sec.	55.1 sec. to 58 sec

## TEST NO.3: TENNIS BALL THROW

Procedure A Football field or an open field required marking at one meter interval be marked on the ground for conducting this test. Tennis balls, measuring tape, a small metal or wooden marking peg, Plastic rope of 50m length are needed to conduct this test.

The subject must throw the Tennis Bal from standing position from behind a line drawn on the field (which is drawn parallel to 1 metre lines). The ball must be thrown using over head throw movement and it should not be hurled or thrown using under hand throw movement. The point of contact of the ball on the field is marked by pegging the stake. If the second or third throw is further the marker is moved. Each subject will be given three trials. The largest of the three distances is considered as test score for evaluation. The distance will be measured to the accuracy of centimeters.

Scoring	Boys	Girls
<b>10 years</b>		
3 points	23 meters and more	16 meters
2 points	22 meters	15 meters
1 points	21 meters	14 meters
<b>11 years</b>		
3 points	25 meters	18 meters
2 points	24 meters	17 meters
1 points	23 meters	16 meters
<b>12 years</b>		
3 points	27 meters	20 meters
2 points	26 meters	19 meters
1 points	25 meters	18 meters
<b>13 years</b>		
3 points	30 meters	22 meters
2 points	28 meters	20.5 meters
1 points	26 meters	19.5 meters
<b>14 years</b>		
3 points	32 meters	25 meters
2 points	30 meters	23 meters
1 points	28 meters	21 meters

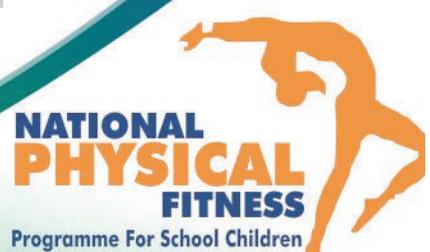
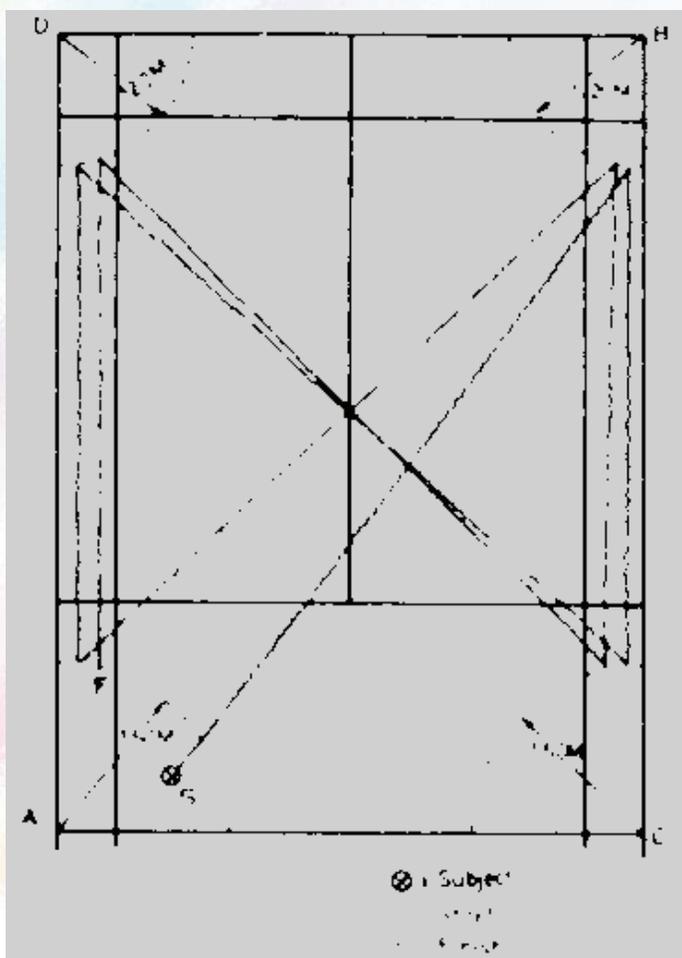


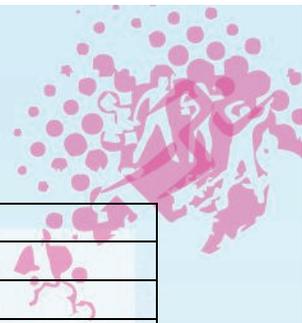


## BADMINTON

### TEST NO. 1: BADMINTON SHUTTLE

Procedure: Four corners of one half (part) of the court will be marked as shown in figure. To start with the subject has to stand in one of the marked corners (say corner 'A') holding a racket in his hand. On the signal "go" the subject has to start sprinting diagonally to the corner 'B' and then straight to corner 'C' then diagonally to corner 'D' and then straight to corner 'A' and repeat this course of movement once (second time) continuously. The subject must touch every corner with one foot at least. Simultaneous to the signal "go" the time keeper starts the stop watch and as the subject touches/ reaches the starting corner at the end of the second lap, the watch will be stopped and the time will be noted to the accuracy of one tenth of a second.



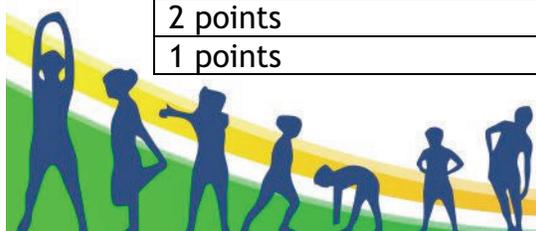


Scoring	Boys	Girls
<b>10 years</b>		
3 points	16.00 sec. and less	17.5 sec. and less
2 points	16.01 sec. to 18.00 sec.	17.6 sec. to 19.0 sec.
1 points	18.01 sec. to 20.00 sec.	19.01 sec. to 21.00 sec
<b>11 years</b>		
3 points	15.00 sec. and less	16.00 sec. and less
2 points	15.01 sec. to 17.00 sec.	16.01 sec. to 18.00 sec.
1 points	17.01 sec. to 19.00 sec.	18.01 sec. to 19.50 sec
<b>12 years</b>		
3 points	14.00 sec. and less	15.00 sec. and less
2 points	14.01 sec. to 15.00 sec.	15.01 sec. to 16.50 sec.
1 points	15.01 sec. to 17.00 sec.	16.01 sec. to 18.00 sec
<b>13 years</b>		
3 points	13.00 sec. and less	14.00 sec. and less
2 points	13.01 sec. to 14.00 sec.	14.01 sec. to 15.00 sec.
1 points	14.01 sec. to 15.00 sec.	15.01 sec. to 16.00 sec
<b>14 years</b>		
3 points	12.00 sec. and less	13.00 sec. and less
2 points	12.01 sec. to 13.00 sec.	13.01 sec. to 14.00 sec.
1 points	13.01 sec. to 14.00 sec.	13.01 sec. to 15.00 sec

### TEST NO.2 : TENNIS BALL THROW

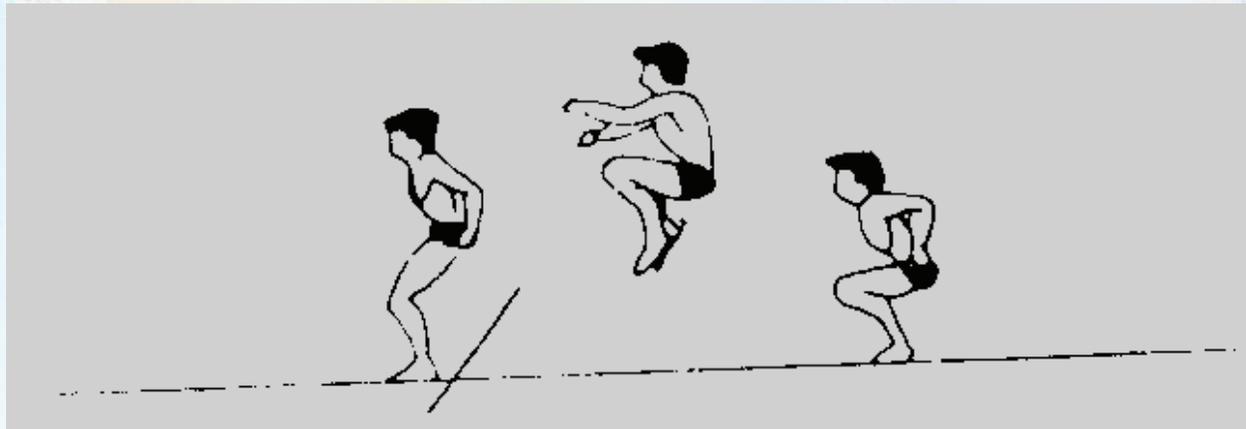
The procedure is name as explained for test No.3 of Athletics.

Scoring	Boys	Girls
<b>10 years</b>		
3 points	30 meters and more	20 meters & more
2 points	27.5 to 29.9 meters	19 to 19.9 meters
1 points	25 to 27.4 meters	18 to 18.9 meters
<b>11 years</b>		
3 points	34 meters and more	22 meters & more
2 points	33 to 33.9 meters	21 to 21.9 meters
1 points	32 to 32.9 meters	20 to 20.9 meters
<b>12 years</b>		
3 points	40 meters and more	27 meters & more
2 points	39 to 39.9 meters	26 to 26.9 meters
1 points	28 to 38.9 meters	25 to 25.9 meters
<b>13 years</b>		
3 points	45 meters and more	30 meters & more
2 points	43 to 44.9 meters	29 to 29.9 meters
1 points	42 to 42.9 meters	28 to 28.9 meters
<b>14 years</b>		
3 points	50 meters and more	35 meters & more
2 points	48 to 49.9 meters	34 to 34.9 meters
1 points	47 to 47.9 meters	33 to 33.9 meters



### TEST NO. 3: STANDING BACKWARD JUMP

Procedure: The subject must stand in front on a line marked on the floor without touching the line, keeping the heels as close as possible to this line and the arms



extended backwards. On signal, the subject must jump backward, swinging his arms forward and backward simultaneously to take off. The spot on which the toe of the subject has landed will be noted and the shortest distance between the outer edge of the line to the landing point is to be measured to the accuracy of a centimeter. Each subject will be given 2 attempts. The greater of the two distances will be considered for evaluation.

Scoring	Boys	Girls
<b>10 years</b>		
3 points	100 cms. and more	90 cms. &more
2 points	90 to 99 cms.	80 to 89 cms.
1 points	80 to 89 cms.	70 to 79 cms.
<b>11 years</b>		
3 points	110 cms. and more	100 cms. &more
2 points	100 to 109 cms.	90 to 99 cms.
1 points	90 to 99 cms.	80 to 89 cms.



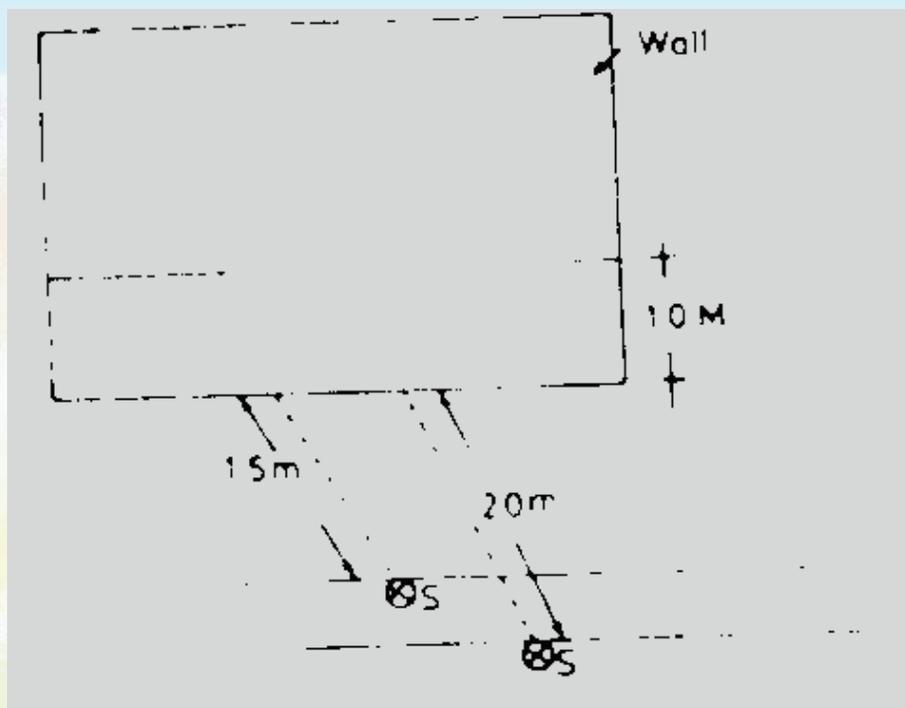
12 years		
3 points	120 cms. and more	110 cms. &more
2 points	110 to 119 cms.	100 to 109 cms.
1 points	100 to 109 cms.	90 to 99 cms.
13 years		
3 points	125 cms. and more	110 cms. &more
2 points	122 to 119 cms.	100 to 109 cms.
1 points	100 to 109 cms.	90 to 99 cms.
14 years		
3 points	130 cms. and more	120 cms. &more
2 points	128 to 129 cms.	115 to 119 cms.
1 points	126 to 127 cms.	112 to 114 cms.

## BASKETBALL

### TEST NO. 1: "WALL PASS TEST"

Procedure: The subjects are to stand behind a line marked at a distance of 1.5 metres (for 10 and 11 years old boys and girls) or 2 metres (for 12 to 14 years old boys & girls) from the wall. The subject has to make maximum number of passes on to the wall above the line marked at the height of one metre from the ground in 30 seconds period using mini Basketball starting on the signal go. Simultaneously, watch is started and stopped at the expiry of 30 seconds and the signal 'stop' is given. Each time the ball hits the wall it will be counted as one pass. The pass on to the wall is always to be made by standing behind the line designated. In case the ball does not rebound and falls on the floor, the subject has to move forward and retrieve the ball and come to the position behind the line and continue pass on the wall. Each subject will be two trials and better of the two scores will be taken for evaluation.

Equipment: 4 Mini Basketballs - Stop watches.



Scoring	Boys	Girls
<b>10 years</b>		
3 points	33 and more	31 & more
2 points	27-32	25-30
1 points	20-26	17-24
<b>11 years</b>		
3 points	35 and more	33 & more
2 points	29-34	27-32
1 points	22-28	19-26
<b>12 years</b>		
3 points	37 and more	35 & more
2 points	31-36	29-34
1 points	26-30	20-28
<b>13 years</b>		
3 points	40 and more	38 & more
2 points	34-39	32-37
1 points	29-33	27-31
<b>14 years</b>		
3 points	45 and more	42 & more
2 points	40-44	37-40
1 points	35-39	32-36

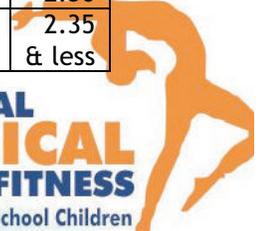


## BATTERY OF TEST AND NORMS FOR SCOUTING TALENT IN SPORTS BOYS

Age Group	Height (cms)	Weight (Kgs)	30m Flying Start (Sec)	Standing Ball Jump (cms)	Ball Throw (cms)	6×10 Shuttle Run	Balancing Ability (Sec)	Vertical Jump (Sec)	800m Run (Sec)
<b>8 years</b>									
SATISFACTORY	127-133	24-28	5.3-4.8	164-183	372-442	18.3-17.5	6.74-6.27	30-32	3.40-3.24
GOOD	127-133	24-28	5.3-4.8	164-183	372-442	18.3-17.5	6.74-6.27	30-32	3.40-3.24
VERY GOOD	140 & above	33 & above	4.4 & less	194 & above	514 & above	16.4 & less	5.78 & less	36 & above	3.06 & less
<b>9 years</b>									
SATISFACTORY	130-138	26-30	5.1-4.7	170-181	413-499	18.0-17.2	6.48-5.98	33-35	3.32-3.17
GOOD	139-147	31-34	4.6-4.3	182-201	500-584	17.1-16.3	5.97-5.47	36-38	3.16-3.01
VERY GOOD	148 & above	33 & above	4.2 & less	202 & above	585 & above	16.2 & less	5.46 & less	39 & above	3.0 & less
<b>10 years</b>									
SATISFACTORY	135-142	28-32	4.9-4.5	180-194	462-548	17.5-16.5	6.07-5.60	36-38	3.26-3.00
GOOD	143-150	34-38	4.4-4.1	195-216	519-633	16.4-15.5	5.59-5.12	39-41	3.07-2.51
VERY GOOD	151 & above	39 & above	4.0 & less	217 & above	634 & above	15.4 & less	5.13 & less	42 & above	2.56 & less
<b>11 years</b>									
SATISFACTORY	140-149	31-36	4.8-4.4	189-204	502-596	17.1-16.2	6.03-5.58	39-41	3.20-3.05
GOOD	130-157	37-41	4.3-3.9	205-225	598-691	16.1-15.4	5.57-5.12	42-44	3.04-2.46
VERY GOOD	158 & above	42 & above	3.8 & less	226 & above	692 & above	15.3 & less	5.1 & less	45 & above	2.45 & less
<b>12 years</b>									
SATISFACTORY	142-153	35-40	4.7-4.3	195-213	530-610	16.8-16.3	5.99-5.52	42-45	3.05-2.55
GOOD	154-160	41-46	4.2-3.8	214-236	611-710	15.9-15.0	5.51-5.05	46-50	2.54-2.42
VERY GOOD	161 & above	47 & above	3.7 & less	237 & above	711 & above	15.1 & less	5.4 & less	51 & above	2.41 & less
<b>13 years</b>									
SATISFACTORY	148-155	33-42	4.2-4.0	206-221	608-700	16.5-15.9	5.86-5.40	44-47	2.57-2.43
GOOD	156-167	43-51	3.9-3.6	222-241	701-794	15.8-15.1	5.39-4.93	48-53	2.42-2.79
VERY GOOD	168 & above	54 & above	3.5 & less	242 & above	795 & above	15.0 & less	4.92 & less	54 & above	2.28 & less
<b>14 years</b>									
SATISFACTORY	154-160	42-47	4.1-3.8	210-225	671-758	16.3-15.8	5.80-5.37	46-50	2.50-2.36
GOOD	161-171	48-58	3.7-3.4	226-245	759-746	15.7-15.0	5.36-4.87	51-56	2.35-2.25
VERY GOOD	172 & above	59 & above	3.3 & less	146 & above	847 & above	14.9 & less	4.88 & less	57 & above	2.24 & less

## BATTERY OF TEST AND NORMS FOR SCOUTING TALENT IN SPORTS GIRLS

Age Group	Height (cms)	Weight (Kgs)	30m Flying Start (Sec)	Standing Ball Jump (cms)	Ball Throw (cms)	6×10 Shuttle Run	Balancing Ability (Sec)	Vertical Jump (Sec)	800m Run (Sec)
<b>8 years</b>									
SATISFACTORY	124-130	23-26	5.6-5.2	150-170	340-405	19.3-18.3	7.50-7.05	26-29	4.03-3.40
GOOD	131-141	27-30	5.1-4.7	171-180	406-470	18.2-17.2	7.04-6.59	30-33	3.39-3.20
VERY GOOD	142 & above	31 & above	4.6 & less	181 & above	471 & above	17.1 & less	6.58 & less	34 & above	3.1 & less
<b>9 years</b>									
SATISFACTORY	129-136	25-30	5.4-4.9	164-180	358-444	19.0-18.0	7.10-6.63	29-32	3.55-3.30
GOOD	137-144	31-34	4.8-4.5	181-191	445-529	17.9-16.8	6.62-6.15	33-36	3.29-3.15
VERY GOOD	145 & above	35 & above	4.4 & less	192 & above	530 & above	16.7 & less	6.14 & less	37 & above	3.14 & less
<b>10 years</b>									
SATISFACTORY	133-144	26-32	5.2-4.8	169-185	413-487	18.5-17.2	6.17-5.76	32-33	3.41-3.16
GOOD	145-158	33-38	4.7-4.3	186-200	488-563	17.1-16.2	5.75-5.34	36-39	3.15-3.02
VERY GOOD	159 & above	39 & above	4.2 & less	201 & above	564 & above	16.1 & less	5.33 & less	40 & above	3.01 & less
<b>11 years</b>									
SATISFACTORY	144-153	33-39	4.9-4.6	180-195	472-551	18.0-17.0	6.13-5.67	35-38	3.29-3.10
GOOD	154-161	40-45	4.5-4.2	196-210	552-630	16.9-16.0	5.66-5.10	39-43	3.09 - 2.53
VERY GOOD	162 & above	46 & above	4.1 & less	211 & above	631 & above	15.9 & less	5.9 & less	44 & above	2.52 & less
<b>12 years</b>									
SATISFACTORY	150-157	36-42	4.8-4.5	185-195	491-570	17.2-16.6	6.06-6.62	39-42	3.10-3.00
GOOD	158-168	43-48	4.4-4.0	196-210	571-650	16.7-15.3	6.61-5.17	43-47	2.59-2.49
VERY GOOD	171 & above	49 & above	3.9 & less	211 & above	651 & above	16.2 & less	5.16 & less	48 & above	2.48 & less
<b>13 years</b>									
SATISFACTORY	158-163	43-48	4.4-4.2	190-200	571-650	16.8-16.4	6.8-5.54	43-45	3.00-2.50
GOOD	164-170	49-54	4.1-3.9	210-215	651-670	16.2-15.9	5.53-5.07	47-50	2.49-2.41
VERY GOOD	171 & above	55 & above	3.8 & less	216 & above	671 & above	15.8 & less	5.06 & less	51 & above	2.40 & less
<b>14 years</b>									
SATISFACTORY	164-170	49-55	4.2-4.0	200-210	651-670	16.4-16.0	5.92-5.47	46-50	2.55-2.45
GOOD	171-174	56-61	3.9-3.7	211-224	671-699	15.9-15.5	5.46-5.01	51-56	2.44-2.36
VERY GOOD	175 & above	62 & above	3.6 & less	225 & above	700 & above	15.4 & less	5.00 & less	57 & above	2.35 & less



2012



# FITNESS ASSESSMENT MODULE





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## 1. Introduction:

Different people and groups interpret physical fitness in different ways. It is sometimes defined as the capacity for sustained physical activities without excessive fatigue or as the capacity to perform everyday activities with reserve energy for emergency situation. By these definition many person incorrectly classify themselves as physically fit. It is especially incorrect to accept these definitions when the relation between inactivity and health are concerned. Some individual consider physical fitness synonymous with cardiorespiratory fitness, whereas other groups limit their perception of physical fitness to muscular strength and endurance.

When one is defining physical fitness, it may be best to describe two types of physical fitness: health related and skill related.

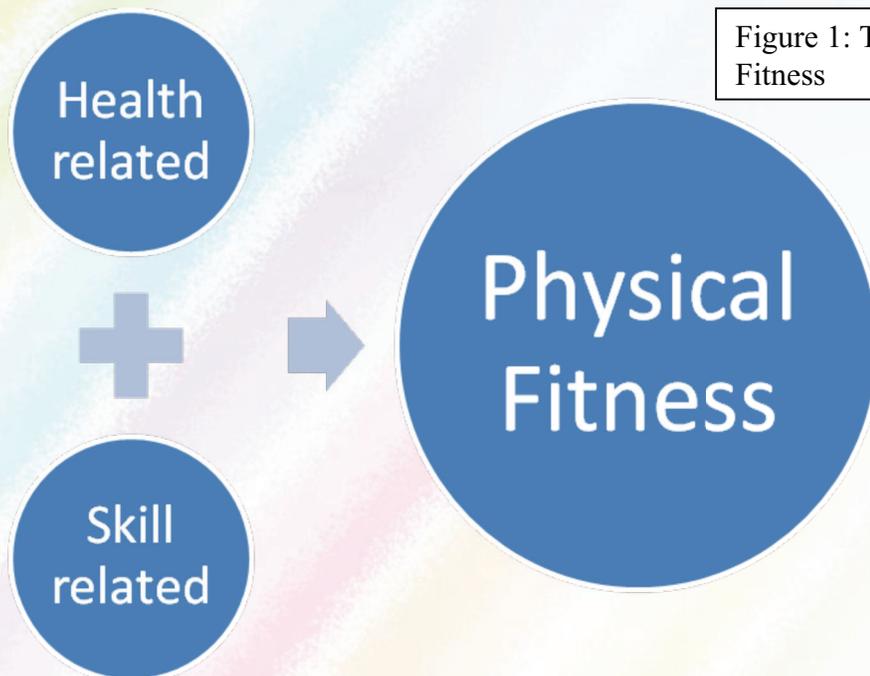


Figure 1: Types of Fitness

### 1.1 Cardiorespiratory fitness

It is the ability to perform large muscle, whole body physical activity of moderate to high intensity for relative long period of time. It is the ability of the circulatory and respiratory system to adjust to vigorous exercise and to recover from the effect of such exercise.

Test of cardiorespiratory fitness

- 1-Mile and 1.5-Mile Runs





**Test Objective:** To measure cardio respirator fitness.

**Age Level:** Five through adult for 1-mile run and thirteen through adult for 1.5-mile run.

**Equipment:** Stopwatch and a flat, measured area.

**Administration and Directions:** Again all performers should practice distance running and understand the advantage of maintaining a constant pace before attempting the test. Assigning a partner, or spotter, to each runner aids in the recording of the scores. After the runners have warmed up, they gather behind a starting line, and on the signal to start, they run (walking is permitted) the distance as fast as possible. The partner of each runner is at the finish line and records the test time of the runner. The test administrator calls out the times as the runners cross the finish line.

**Scoring:** The score is the time in minutes and seconds to compete the run.

**Norms:**

**Table 1: Cardiorespiratory Fitness (Age 7-9 yrs)**

Male	7 years	8 years	9 years
Very good	8.06	7.58	7.17
Good	9.37	9.14	8.36
Average	11.25	11	9.56
Poor	14.02	13.29	12
V.Poor	17.17	16.19	15.44
Female	7 years	8 years	9 years
Very good	8.48	8.45	8.24
Good	10.55	10.55	9.58
Average	12.3	12.3	11.12
Poor	14.3	14.16	13.18
V.Poor	17.44	16.58	16.42

**Table 2: Cardiorespiratory Fitness (Age 10-12 yrs)**

Male	10 years	11 years	12 years
Very good	6.56	6.5	6.27
Good	8.1	8	7.24
Average	9.19	9.06	8.2
Poor	11.05	11.31	10
V.Poor	14.28	15.25	13.41
Female	10 years	11 years	12 years
Very good	7.59	7.46	7.26
Good	9.3	9.12	8.36
Average	11.06	10.27	9.47
Poor	12.54	12.1	11.35
V.Poor	17	16.56	14.46



**Table 3: Cardiorespiratory Fitness (Age 13-15 yrs)**

Male	13 years	14 years	15 years
Very good	6.11	5.51	6.01
Good	6.52	6.36	6.35
Average	7.27	7.1	7.14
Poor	8.35	8.02	8.04
V.Poor	10.23	10.32	10.37
Female	13 years	14 years	15 years
Very good	7.1	7.18	7.39
Good	8.18	8.13	8.42
Average	9.27	9.35	10.05
Poor	10.56	11.43	12.21
V.Poor	14.55	16.59	16.22

## 1.2 Flexibility

It is the ability to move the body joints through a maximum range of motion without under strain.

Test of flexibility

- Sit and reach test

**Objective:** To measure the flexibility of the lower back and posterior thighs.

**Age level:** 5 years to adulthood

**Equipment:**

12 inches high bench should be used when administering the test. It is crucial that 9 inches mark be exactly in line with vertical panel against which the test performer's feet will be placed.

**Administration and directions:**

The test apparatus should be prevented from slipping (may be placed against the wall) and the test performer should not be wearing shoes.

The performer:

1. Sit at the test apparatus with the knees fully extended and the feet shoulder width apart, flat against the end of the board.
2. With the palm down and hands placed on top of each other, extend the arms forward and
3. Reaches directly forward four times and holds the position of the maximum reach on the fourth trial for one second.

The test administrator may place a hand on the knee of the performer to discourage knee flexion, but the knees should not be hyperextended.



### Scoring:

The score is the most distant point reached on the fourth trail, measured to the nearest  $\frac{1}{4}$  inch or the nearest centimeter. The test administrator should be in a position to note the most distant line touched by the fingertips of both hands. If the hands reach unevenly, the position is not held for 1 second, or the knees bend, the test should be re-administered.

**Norms:** In inches for Sit and Reach for ages seven through fifteen are mentioned in the below picture.

**Table 4: Flexibility test (Age 7-9 yrs)**

Male	7 years	8 years	9 years
Very good	13	13.5	13.5
Good	11	11.5	11.5
Average	10	10	10
Poor	8.75	8.75	8.75
V.Poor	6.25	6.25	4.25
Female	7 years	8 years	9 years
Very good	13.5	14.25	13.75
Good	12.25	12.25	12.25
Average	10.75	11	11
Poor	9.5	9	9
V.Poor	6.25	6.75	6.75

**Table 5: Flexibility Test (Age 10-12 yrs)**

Male	10 years	11 years	12 years
Very good	13	13.5	13.75
Good	11	11.5	11.5
Average	10	10	10.25
Poor	8	8.25	8.25
V.Poor	4.75	5.25	5.25
Female	10 years	11 years	12 years
Very good	13.75	14.5	15.75
Good	12.25	12.5	13.5
Average	11	11.5	12
Poor	9.5	9.5	10
V.Poor	6.25	6.25	6

**Table 6: Flexibility test (Age 13-15 yrs)**

Male	13 years	14 years	15 years
Very good	14.25	15.5	16.25
Good	12	13	13.5
Average	10.25	11	12



Poor	8	9	9.5
V.Poor	4.25	6	5.25
Female	<b>13 years</b>	<b>14 years</b>	<b>15 years</b>
Very good	17	17.5	18.25
Good	14.25	15	16.25
Average	12.25	13	14.25
Poor	9.5	11	12.25
V.Poor	6.75	7	7.5

### 1.3 Muscular strength and endurance

- One minute curl up test

**Objective:** To measure abdominal strength and endurance.

**Age level:** five through sixty plus

**Equipment:** Mats/level ground and stopwatch

**Administration and directions:**

With the modified sit-ups test, the test performer assumes a supine position on the mat with the knees flexed, feet flat on the mat, and the heels between 12 and 18 inches from the buttocks. The arms are closed on the chest with the hands on opposite shoulders. A test partner holds the feet of the test performer to keep them in contact with the mat. On the signal “Go” the test performer:

1. Curls to a sitting position and touches the thigh with the elbows while maintaining arm contact with the chest and keeping the chin tucked on the chest.
2. Curls back to the floor until the midback contact the mat and
3. Continues to perform as many sit-ups as possible in 60 seconds.

The test administrator should use the signal “ReadyGo” to begin the test and the word “Stop” to conclude the test at the end of 60 seconds. Pausing between sit-ups test is permitted.

**Scoring:** The test score is the number of curls that can be performed in 1 minute.

**Norms:**

	7 years	8 years	9 years
Male			
Very good	42	48	47
Good	33	37	38
Average	26	30	32
Poor	19	25	25
V.Poor	10	15	15



Female	7 years	8 years	9 years
Very good	40	44	44
Good	31	35	35
Average	25	29	29
Poor	20	22	23
V.Poor	10	12	14

**Table 8: Muscular strength & endurance test (Age 10-12 yrs)**

Male	10 years	11 years	12 years
Very good	50	51	56
Good	40	42	42
Average	34	37	37
Poor	27	30	30
V.Poor	15	17	17
Female	10 years	11 years	12 years
Very good	47	50	52
Good	39	40	41
Average	32	34	36
Poor	25	28	30
V.Poor	15	19	19

**Table 9: Muscular strength & endurance test (Age 13-15 yrs)**

Male	13 years	14 years	15 years
Very good	58	59	59
Good	48	49	49
Average	41	42	44
Poor	35	36	38
V.Poor	25	27	28
Female	13 years	14 years	15 years
Very good	51	51	56
Good	41	42	43
Average	35	35	37
Poor	29	30	30
V.Poor	18	20	20



## 1.4 Agility

### Test of Agility

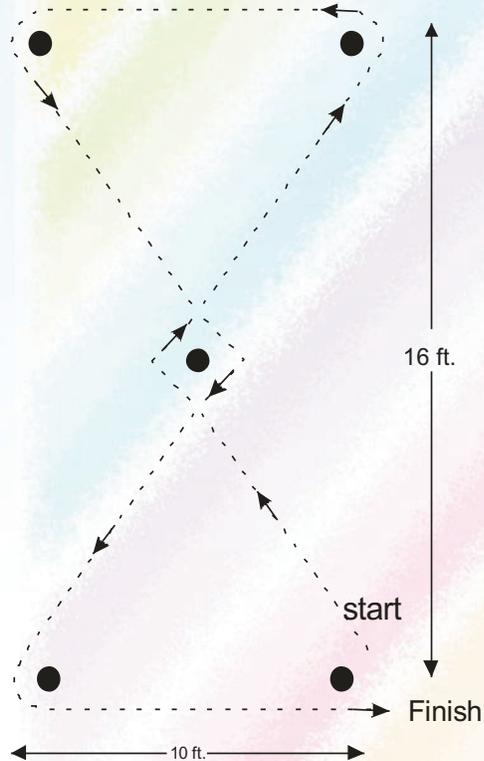
- Barrow Zigzag Run

**Test Objective:** To measure agility while running and changing direction.

**Age Level:** Junior high through college. (Though this test was originally designed for males, it may be satisfactorily used with junior high through college-age females.)

**Equipment:** Stopwatch and five standards that are used for high jump, volleyball, or badminton. Cones also may be used.

**Administration and Directions:** The course is designed as shown in figure. On the signal "Go," the test performer runs, as fast as possible, the prescribed course in a figure eight fashion for three complete laps. The standards should not be touched in any manner. If a foul is committed or the course is run improperly, the student is required to run the course again. (The validity and reliability of the test would probably be affected minimally if you required the students to run only two laps.)



**Scoring:** The score is the time to the nearest one-tenth second required to complete the course three times.



## Norms:

**Table 10: Agility test (Age 7-9 yrs)**

Male & Female	7 years	8 years	9 years
Above average	25.2 & below	24.5 & below	24.6 & below
Average	29 to 25.3	29.5 to 24.6	27.9 to 24.7
Below average	29.1 & above	29.6 & above	28 & above

**Table 11: Agility test (Age 10-12 yrs)**

Male & Female	10 years	11 years
Above average	25.8 & below	25.8 & below
Average	28.9 to 25.9	28.9 to 25.9
Below average	29 & above	29 & above

### 1.5 Power

Test of power

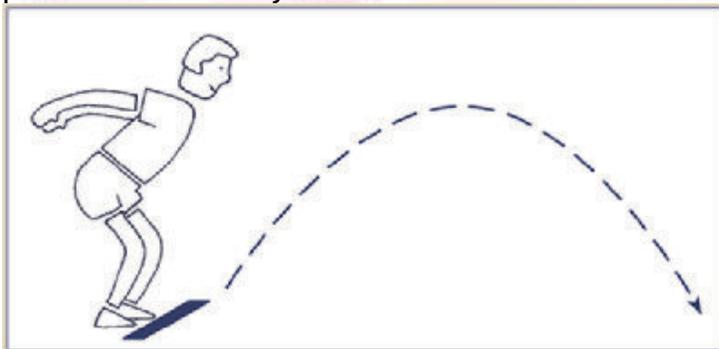
- Standing Broad Jump

**Test Objective:** To measure explosive leg power.

**Age Level:** Six through college-age.

**Equipment:** A yard-stick, tape and tape measure; mat is optional.

**Administration and Directions:** A tape measure should be taped to the floor or mat close to and parallel with the area where the jump will be performed. The test performer (1) stands behind the restraining line with the feet parallel and several inches apart; (2) bends the knees and swings the arms forward; and (3) jumps forward as far as possible. The test administrator marks the landing point of the nearest heel to the restraining line with the yardstick (yardstick is placed perpendicular to tape measure). All test performers should be permitted to practice the jump until they can perform it correctly. Three trials are administered.





**Scoring:** The score is the number of inches between the restraining line and the nearest heel on landing. If the test performer falls backward on landing, the measurement is made from the restraining line to the nearest part of the body touching the floor or mat.

**Norms:**

**Table 12: Power Fitness test (Age 10-12 yrs)**

Male	10 years	11 years	12 years
Very good	6'0"	6'2"	6'6"
Good	5'4"	5'7"	5'9"
Average	4'11"	5'2"	5'5"
Poor	4'6"	4'8"	5'0"
V.Poor	3'10"	4'0"	4'2"
Female	10 years	11 years	12 years
Very good	5'10"	6'0"	6'2"
Good	5'2"	5'4"	5'6"
Average	4'8"	4'11"	5'0"
Poor	4'1"	4'4"	4'6"
V.Poor	3'5"	3'8"	3'10"

**Table 13: Power Fitness test (Age 13-15 yrs)**

Male	13 years	14 years	15 years
Very good	7'1"	7'6"	8'0"
Good	6'3"	6'8"	7'2"
Average	5'9"	6'2"	6'8"
Poor	5'0"	5'6"	6'1"
V.Poor	4'2"	4'8"	5'2"
Female	13 years	14 years	15 years
Very good	6'5"	6'8"	6'7"
Good	5'9"	5'11"	5'10"
Average	5'3"	5'4"	5'5"
Poor	4'9"	4'10"	4'11"
V.Poor	4'0"	4'0"	4'2"



## 20 minutes exercise plan

20 mins exercise module			
	Activity Name	Sets/repetition	Time taken
Warm-up	Surya Namaskar	2 Sets	5 mins
Exercise session	On the spot jogging		1 mins
	Jumping		30 seconds
	Twisting		30 seconds
	Jumping Jacks	25-30 repetition	1 mins
	Mass Drill	8 Sets	7 mins
Cooling down	Stretching (Head to toe)		5 mins
			20 mins

- **Surya namaskara (5 mins)**

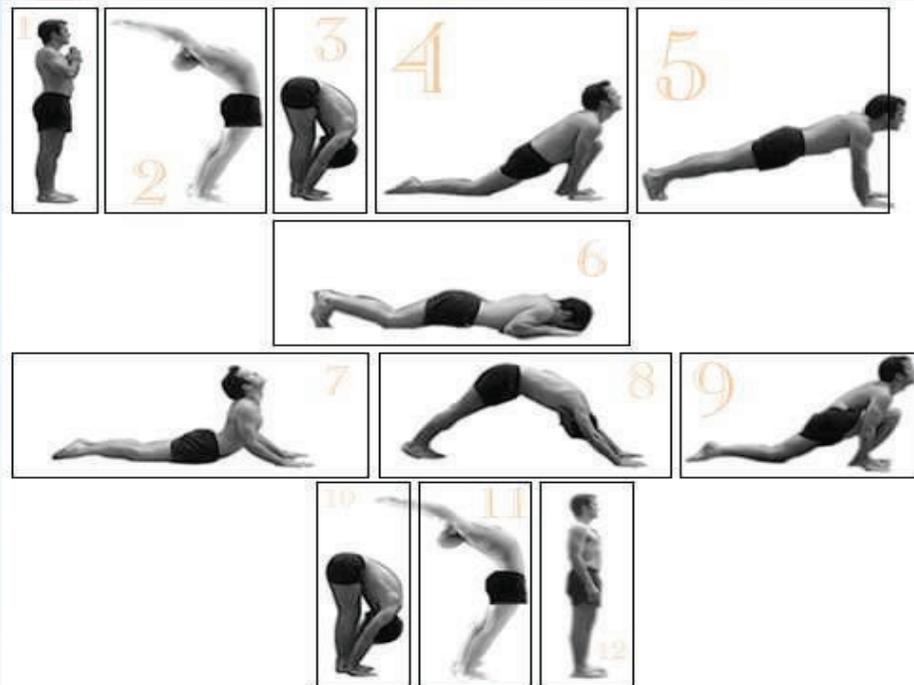
Surya Namaskara known in English as Sun Salutation is a common sequence of Hatha yogaasanas. Its origins lie in a worship of Surya, the Hindusolar deity. This sequence of movements and poses can be practised on varying levels of awareness, ranging from that of physical exercise in various styles, to a complete sadhana which incorporates asana, pranayama, mantra and chakrameditation. The physical base of the practice links together twelve asanas in a dynamically performed series. These asanas are ordered so that they alternately stretch the spine backwards and forwards. When performed in the usual way, each asana is moved into with alternate inhalation and exhalation (except for the sixth asana where the breath is held in external suspension). A full round of Surya namaskara is considered to be two sets of the twelve poses with a change in the second set to moving the opposite leg first through the series.

The Surya Namaskar is performed usually early in the morning facing the morning rising Sun.



The Namskar is done in 12 steps, each step having its own posture (including position and form) with its own breathing pattern (inhalation or exhalation), and its own mantra.

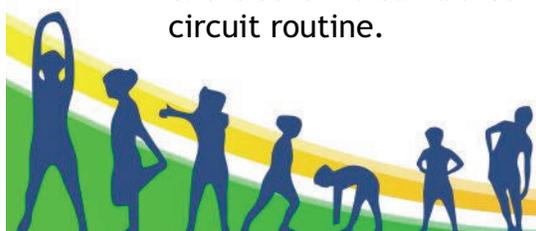
### Steps



### On the spot jogging (1 min)

There is no difference in on the spot jogging and normal jogging except for the fact that you cover distance in normal jogging. It is apt for busy people who do not have any time to work out but still want to keep themselves in shape. The fact that it costs nothing but still keeps us fit is an added advantage and it comes with a host of another benefits.

This is a very good option for those people who want to lose weight very quickly. There are many other unexpected and amazing benefits of on the spot jogging will be mentioned now. It is very efficient in improving lung capacity; it also keeps the respiratory and circulating system in check and also improves the health of cell by increasing the intake of oxygen. But the best thing about on the spot jogging is that helps in toning up of the muscles. It is also good for your cardiovascular health as it increases your heart rate and also keeps on burning calories at a continuous rate. It exercises all the muscles in your legs including your hips, thighs, gluteals and calf muscles making it as effective as any exercise you might wind up doing at the gym. Another beneficial fact about on the spot jogging is that it can be done as a lone exercise or it can be combined with some other exercises to form a highly effective circuit routine.



### Jumping (30 seconds)

Jumping or leaping is a form of locomotion or movement in which an organism or non-living mechanical system propels it through the air along a ballistic trajectory. Jumping can be distinguished from running, galloping, and other gaits where the entire body is temporarily airborne by the relatively long duration of the aerial phase and high angle of initial launch.

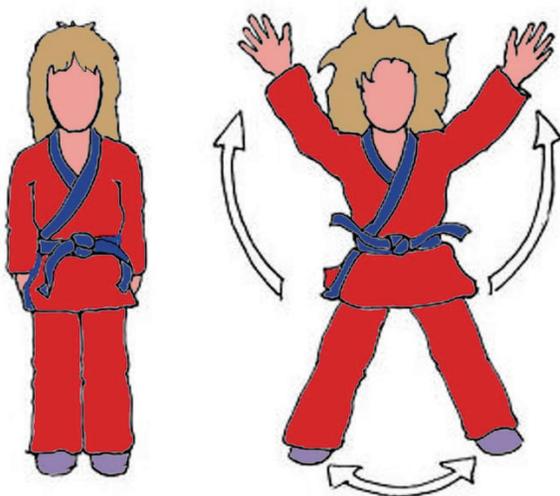
There are several benefits of jumping such as weight loss, increased cardio vascular fitness, improves muscles tone etc.

### Twisting (30 seconds)

Twisting is a cardio exercise that participants across age groups can do. Derived from a dance style, the participants jump on their toes while twisting the lower body. The exercise has an impact on the cardio vascular system (because of jumping) and the twisting impacts on the waist and the lower back regions. Thus making the muscles in the lower abdomen, pelvic and lower back muscles.

### Jumping jacks (1 min)

A jumping jack (Canada & US) or star jump (UK and other Commonwealth nations), also called side-straddle hop in the US military, is a physical jumping exercise performed by jumping to a position with the legs spread wide and the hands touching overhead and then returning to a position with the feet together and the arms at the sides. The jumping jack name comes from the traditional toy of the same name, while "star jump" refers to the person's appearance with legs and arms spread. More intensive versions of this jump include bending down (over) and touching the floor in between each jump.



### Mass Drill (7 mins)

The good old rhythmic exercise of mass drill is always a way to involve maximum number of kids at the same time. Done with & without the music, it is a form of exercise that any kid can perform without much ado. With batons or pompoms in hands, it has coordinated slow paced movements that makes the entire exercise a visual treat.

It includes various numbers of free hand exercises with the different body part movements in different direction. Usually we do these exercises on counting (8 counts or 16 counts)

### Stretching head to toe (5 mins)

Stretching is a form of physical exercise in which a specific skeletal muscle (or muscle group) is deliberately stretched, often by abduction from the torso, in order to improve the muscle's felt elasticity and reaffirm comfortable muscle tone. The result is a feeling of increased muscle control, flexibility and range of motion. Stretching is also used therapeutically to alleviate cramps.

Benefits of stretching include:

- Relaxation of muscle stress and tension
- Relief of muscle cramps and soreness
- Improved body fitness, posture, and body image
- Reduced risk of low-back pain
- Prevention of injury



## Physical Fitness for the Persons with Visual Impairment

**Dr. M.S. Nagarajan Ph.D.**

Dean, Sri Ramakrishna Mission Vivekananda University,  
Periyarayanpalayam, Coimbatore

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Skill and fitness tests are more frequently used in determining the level of motor efficiency of the regular physical education student's standardized skill tests and fitness tests are available. But these tests are of course designed for use for normal students and must be modified to make them applicable to the Blind.

### **Physical fitness Test:**

Physical fitness may be defined as a reflection of one's ability to work and play with vigour and pleasure, without undue fatigue and with sufficient energy left for meeting unforeseen emergencies. Physical fitness has many components. Several studies made on this, reveal that factors involved in physical fitness are:

1. **Strength**
2. **Power**
3. **Speed**
4. **Agility**
5. **Flexibility**
6. **Balance**

### **Dynamic strength or muscular endurance:**

Dynamic strength which is also known as muscular, is closely related to the strength of the muscle. Dynamic strength is frequently measured by pull-ups, dips, push-ups and leg lift.

### **Sit ups:**

The sit-up test is performed the same way by both boys and girls. The subject is supine with the legs straight and feet slightly apart. The hands are clasped behind the head and the feet are held down. The subject rolls up to touch the right elbow to the left knee and then lower the trunk to the floor.

The trunk is raised again to touch the left elbow to the right knee. One point is counter every time the subject sits up and touches the elbow to the knees. The knees may be bent necessary, to touch the elbows. Number of points 20 seconds is the score.





### **Explosive strength or power:**

Explosive strength has been called power by some authors. It is the ability to release force at a specific movement. A release of force by the muscles, involves both speed of contraction and strength of the muscle. Speed and strength must be combined to get power.

### **Measuring power of Explosive strength:**

The power of legs muscles relative to body weight can be measured by a Vertical Jump or standing broad jumps, the power of arm shoulder muscles by the softball throw.

### **Vertical Jumps:**

The subject stands with a piece of chalk in one hand with feet parallel to the wall and shoulder of the hand holding the chalk to the wall. Keeping the heels on the floor the subject reaches up as high as possible, and makes a chalk mark on the wall. This is the base line. The subject then crouches and jumps as high as possible and makes a mark on the wall. The difference between these two lines is the score. Three chances will be given, out of the best is taken as the records.

### **Standing Broad Jump:**

The subject puts his toes on the line and then without preliminary movement of the feet, jumps forward as far as possible. The score is the length of the jumps. Three trials:-

### **Speed of muscular movement:**

Speed of body movement depends upon speed of muscular contraction.

Running in place (on the spot running) may be used to measure speed of limb movement. The score is the number of times the right foot touches the ground in a period of 20 seconds.

### **Agility:**

Agility is speed in changing direction. This can be measured by Thrusts.

### **Thrusts:**

The subject takes a squatting position with the hands and feet flat on the floor. The knees should make contact with the arms. At the command go the stop watch is started. The subject takes the weight upon his hands so that he may thrust his legs straight out behind him. The legs are returned to the original position. The score is the number of complete thrust the subject is able to perform in 20 seconds. One - half point is awarded for completing half of the thrust. Repetitions which are incorrect are not counted towards the score.





**Flexibility:**

The range of movement possible in any given joint in the human body. The flexibility test most frequently administered is toe touching with knees straight which measures the flexibility of hamstring muscles.

**Sit and Reach Test:**

**Objectives:** To measure the flexion of the hip and back as well as the elasticity of the hamstring muscles.

The subject assumes a sitting position on the floor with the legs extended at right angles to a line drawn on the floor. The heels should touch the near edge of the line and be about 5' apart. A scale is placed between the legs of the performer so that it rests on the heel line. The subject should try to reach with both hands as forward as possible and hold. The score is the farthest point reached on the scale by the finger tips. The best score of 3 trials is recorded as the best score.

**Balance:**

Good balance is important in the satisfactory performance of nearly all movement required by everyday life. The ability to maintain total body balance with the eyes closed is called gross body equilibrium. The maintaining of body balance with eyes open is known as balance with visual clues.

To measure balance with eyes close, the stork stand or static balance test can be used.

**Static Balance Test:**

The subject places his hands upon his hips. One of the feet is brought up and placed against the inside of knee, when the subject has taken the position, the stop watch is started. The score is the number of seconds the balances is maintained.

**PHYSICAL FITNESS TEST SCORE CARD**

**Name:** \_\_\_\_\_ **Height:** \_\_\_\_\_ **Sex:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **Weight:** \_\_\_\_\_ **Age:** \_\_\_\_\_

Sl.No.	Test Item	Record	Points	Remarks
1.	SIT UPS			
2.	STANDING BROAD JUMP			
3.	RUNNING IN THE PLACE			
4.	SIT AND REACH			
5.	STATIC BALANCE			
6.	THRUSTS			

**PLACE:** \_\_\_\_\_

**SIGNATURE** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Test Administrator** \_\_\_\_\_





## PLAY 4 INDIA

### SPAT- 2012

#### GUIDELINES TO CONDUCT THE BATTERY TEST

##### **Anthropometric Measurements:**

##### **1. Height:**

**Test Aim:** To measure the standing height.

**Equipment:** Height Measuring Stand or marking on the wall.

**Procedure:** The subject stands erect bare-footed with heels and back of the head touching the stands or wall. The device of measurement stand or a flat card-board is put up on the top of the head to take the height of an individual.

**Scoring:** The measurement is taken to the nearest centimeter.

##### **2. Weight:**

**Test Aim:** To assess the body mass.

**Equipment:** Standard Weighing Machine.

**Procedure:** The subject stands on the platform of the weigh-in Machine bare-footed with foot parallel and weight equally distributed on the foot. Minimum cloth worn like vest and short in case of boys and shirts/blouse and shorts/skirt in case of girls.

**Scoring:** The weight is recorded from the indicator dial of the machine in kgs.



## Motor Ability Tests:

### 3. 30 Mtr. Flying Start:

- Test Aim:** To measure the maximum speed.
- Equipment:** Stop Watch (1/10th of a second) and six flag posts. 45 metre running strip, measuring tape.
- Marking:** 45 metre distance is divided into two zones of 15 metres and the other of 30 metres say F.A. & B. is of 15 metres and AB is of 30 metres. Take radius of 30 metres and mark an arc from point A. Mark another arc of 30 metres from point B and intersecting at point C. Join CA and extend to E and join CB and extend to D. Fix flags at all these six points A, B, C, D, E & F.
- Procedure:** The performer stands behind the line F and accelerates and crosses the line 'B' with maximum possible speed.
- Scoring:** The time keeper stands on points C and when the runner comes in line with flag A and E, he starts the watch and when the torso of runner comes in line B & D he stops the watch. The time is then noted down from the watch.
- Note: -** Participants are not permitted to run with spikes and running area should be firm and non-slippery.

### Vertical Jump:-

- Test Aim:** To test the explosive strength of legs and extensibility of hip muscles.
- Equipment:** Chalk Powder, Measuring Tape, a Chair and a Bench.
- Marking:** A Vertical wall is prominently marked in centimeters up to 3.25 metres.
- Procedure:** The performer dips his/her fingers in chalk powder and stands side-wise against the wall, keeping the arm raised completely above the head & clap the extended hand marked with chalk on fingers straight. Then he jumps as high up as possible and touch the wall. The reading shall be noted by keeping eyes in level with the chalk mark on the graduated marking.
- Scoring:** The standing reach is subtracted from the jumping reach. The score will be best of three jumps.





### **Standing Broad Jump:**

**Test Aim:** To measure the explosive strength of the legs.

**Equipment:** Measuring tape, a leveled long jump pit with the take offline.

**Marking:** A line is marked near the edge of the jumping pit.

**Procedure:** The performer stands behind the take off line with feet together. He flexes his knees, takes back arms raising the heels a little and along with a vigorous forward and upward arm swing he extends the knees into jumping pit to cover the maximum horizontal distance.

**Scoring:** The distance covered in centimeters between the take offline and the nearest landing mark is measured. The score will be best of three trials.

### **Medicine Ball Put:-**

**Test Aim:** To measure explosive strength of the arms.

**Equipments:** Medicine Ball of 1 Kg. for upto 10 years, 2Kg. for 11 years and above.

**Procedure:** The subject sits in the centre of the shot put throwing circle with his legs stretched forward comfortably. Legs should also be comfortably apart. His spine should be inline with the centre of the circle. From this position he throws the medicine ball up and forward as far as possible with both hands. The throw should be made from the chest outwards. Three attempts are given.

**Scoring:** The distance is measured in centimeters. The score will be best of three throws where a horizontal distance shall be measured from the centre of the circle.

### **6 X 10 Meters Shuttle Run .**

**Test Aim:** To determine the agility of the subject.

**Equipment:** Stop watch, lime powder.

**Marking:** 10 Metres of distance is marked by two parallel lines of 5 metres each.





**Procedure:** The subject stands behind the starting line. On getting starting signal “GO” he runs faster, goes nearest to the other line and touches it with the one hand (see figure), turns and comes back to starting line, touches it with hand, turns and repeats it for a total of 5 times and 6th time runs over the line as fast as possible.

**Scoring:** The time taken by the performer to complete the course of 6 x 10 meters to the nearest 1/10th of a second is recorded as a score of the test. Only one chance is given.

**Note:** Participants are not allowed to use spikes and the area should be firm and non-slippery.

### **Flexibility Test :( Forward Bend and Reach)**

**Test Aim:** To measure the flexibility of the subject.

**Equipment:** Test should be conducted on stable wooden box 40 CMs high. On one side of the box scale 0-30 Cms is marked.

**Procedure:** Subject stands barefoot on the box with both feet together with toes in line with the edge of the box. From this position he bends forward and downward while keeping his knees straight. He extends his hands along the scale as down as possible. Both the hands should be parallel. At a maximum reach he holds the position for about 2 seconds.

**Scoring:** The result is read from the scale. Two attempts are given after a recovery rest of 30 seconds. In case a subject is not able to extend his hands even to the level of the box then the distance from the 0 cm mark to the tip of middle finger should be measured with a scale and recorded as a negative score.

### **9. 800 Meters Run:-**

**Test Aim:** To measure the endurance of the subject .

**Equipment:** Stop Watch .

**Marking:** The 400 metres distance is marked on the field or a marked 400 metres track can be used where curve start is to be given.

**Procedure:** The performer stands behind the starting line. On getting starting signal he runs the 400 metre distance two times in as limited time as possible.

**Scoring:** The time to cover the 80 metres distance to nearer 1/10th of a second is recorded as score of the test.

**Instruction:-**

1. Child should have a Date of Birth Certificate in original from School/Hospital/Municipality.
2. Child should bring two passport size photographs while appearing for final selection trials.
3. Child should have a proper sports kit for general as well as for specific tests as required in each game/sport.

**TEST SCHEDULE FOR SPAT-2012**

Sr. No.	Program	Date	Duties
1	Publicity for the registration/scheme	20/10/2011	(i) Jingle will be prepared by Sh. Harvinder Malik and publicity material etc. will be arranged by Sh. M.L. Vairagi, DDY. (ii) Minimum 5 hoardings will be displayed in each district - Sh. M.L. Vairagi, DDY. (iii) Press release - Sh. M.L. Vairagi, DDY. (iv) Press conference/ release in all districts - concerned DSYAOs. (v) YCOs/ Yoga Volunteers and KridaShree will be responsible to mobilize/encourage players for maximum registration and participation in SPAT-2012. (vi) SMS to Physical Education Teachers/players by I.T Company. (vii) SPAT-2012 sticker - Sh. Harish Gandhi, DDO.
2	Meeting with State	21/10/2011	Meeting will be held at Gurgaon under Sports Association the chairmanship of Sh. O.P. Singh, IPS, Director, Department of Sports & Youth Affairs, Haryana - DDS Gurgaon will arrange the meeting.
3	On line registration for SPAT-2012	25/10/2011	I.T. Company will be the responsible for completion of the registration and to prepare the list for the smooth conduct of SPAT-2012.



4	Meeting of Block Level Incharge, YCOs, Yoga Volunteers and Kridashree	25/10/2011	Training to conduct SPAT-2012 in school round - Block Incharge Coaches will be responsible to hold the meeting and to train the Physical Education Teachers, YCOs, Yoga Volunteers and Kridashree.
5	Observers	25/10/2012	(i) Awardee players will be appointed as observers - SPAT Branch. (ii) Observers will be responsible to contribute their views/ experience for the success of the SPAT-2012. (iii) Observers will send the report everyday to the directorate.
6	Oversight committee	2/10/2012	(i) Oversight committee shall be responsible for fair conduct of SPAT-2012 in their respective area and will be accountable to Directorate.
7	Identity Card for Department	20/10/2011	Identity Card will be issued to departmental officials/ volunteers for the officials/volunteers identification - Sh. Harish Gandhi, DDO.
8	First Round ( School Round ) of SPAT-2012	8-17/11/2011	First Round (School Round ) of SPAT-2012 will be conducted by the Schools.
9	Submission of result SPAT-2012.	18-19/11/2011	The result will be submitted by the school of First Round of the concerned District Sports Officers.
10	Second Round of SPAT-2012.	6-15/12/2011	Test will be conducted by the technical committee, constituted by the department, at district head quarter - Main Stadium—DSO.
11	Submission of result of Second Round of SPAT-2012.	16-17/12/2011	The result will be submitted by the District Sports Officer to the SPAT Branch in Directorate.
12	Final Round of SPAT-2012.	20-25/1/2012	The test will be conducted at the selected centres by the technical committee (constituted by the department).
13	Submission of result of Final Round of SPAT-2012.		The result will be submitted by the Head of the committee to the SPAT Branch in Directorate.
14	Declaration of result of SPAT-2012.	10/2/2012	The results will be declared by the directorate.



## SPAT -2012 GENERAL GUIDE LINES

The test are to be spread over in two and more days. The sequence in which the tests should beconducted is given below:-

S.No.	Day	Event
1.	First Day ( 8.11.2011 )	(i)Registration of Player (ii) Height and Weight recording
2.	Second Day (9.11.2011) and onward	(i) 30m Flying start ( Race) (ii)Standing Broad Jump (iii) 6 x 10m Shuttle Race.

### POINT TO BE CONSIDERED: ----

1. Before the test a short warm- up ; 10 min. jogging and walking followed by10 min free hand exercises.
2. Trial attempts before the tests are allowed in order to familiarize the subjectwith the tests.
3. Subject should be divided into groups as per the number of stations.
4. There should be separate station for each test with adequate distance.
5. Testers, time keepers and assistants should be briefed before hand and shouldbe given needed practice before starting the tests.

### AGE GROUPING

The cutoff date for determining the age of the subject should be the date ( i.e. 1st day) on which thetests are conducted. In this test the date should be considered as on 20th January 2012.

## The age groups for the SPAT-2012 are ----

Age Group	Birth in between the date and year.
8 Years	20th July 2003 to 19th July 2004 ( Player who born on and after 20th July 2003and born on and before 19th July 2004 )
9 Years	20th July 2002 to 19th July 2003 ( Player who born on and after 20th July 2002and born on and before 19th July 2003 )
10 Years	20th July 2001 to 19th July 2002 ( Player who born on and after 20th July 2001and born on and before 19th July 2002 )
11 Years	20th July 2000 to 19th July 2001 ( Player who born on and after 20th July 2000and born on and before 19th July 2001 )
12 Years	20th July 1999 to 19th July 2000 ( Player who born on and after 20th July 1999and born on and before 19th July 2000 )
13 Years	20th July 1998 to 19th July 1999 ( Player who born on and after 20th July 1998and born on and before 19th July 1999 )
14 Years	20th July 1997 to 19th July 1998 ( Player who born on and after 20th July 1997and born on and before 19th July 1998 )
15 Years	20th July 1996 to 19th July 1997 ( Player who born on and after 20th July 1996and born on and before 19th July 1997 )
16 Years	20th July 1995 to 19th July 1996 ( Player who born on and after 20th July 1995and born on and before 19th July 1996 )
17 Years	20th July 1994 to 19th July 1995 ( Player who born on and after 20th July 1994and born on and before 19th July 1995 )
18 Years	20th July 1993 to 19th July 1994 ( Player who born on and after 20th July 1993and born on and before 19th July 1994 )
19 Years	20th July 1992 to 19th July 1993 ( Player who born on and after 20th July 1992and born on and before 19th July 1993 )

## SPAT-2012 CHECK LIST

1. Public Address System
2. Drinking water
3. Indicators to be installed at proper place at the venue.
4. Doctor at the place of events.
5. Photographer.
6. Proper tenting as required.
7. Technical officials are not allowed to carry mobile in side the SPATarea .





For the players :-

1. Players should bring their original age proof certificate along with photo copy.
  - (i) Board certificate or
  - (ii) Admission and withdrawal register photo copy with the signature of competent authority.
  
2. Players should bring four passport size photo graphs with their name on the back side second round test.

Special features for consideration :-

1. Information from the players ----

Whether prefer to enroll in Residential scheme ?      Yes /No

Whether prefer to enroll in Day Boarding Scheme      Yes/No

Whether player belong to General Category?      Yes/No

Whether player belong to BC or SC category ?      Yes/No





**BATTERY OF TESTS AND NORMS FOR SCOUTING  
TALENT IN SPORTS  
BOYS**

AGE	MARKS	30 M FLYING START (SEC.)	S.B.JUMP (CM)	Medicine Ball put upto 10 yrs-1kg Above - 2kg. (Mtrs)	6 X 10 m Shuttle Run (Sec.)	Forward Bend & Reach (cm)	S.V.Jump (cm)	800 m. Run (Min.Sec.)
8 years	1	5.3-4.8	131-157	2.26-2.50	19.7-18.8	4-6	20-24	4.09-3.48
	2	4.7-4.05	158-176	2.51-2.76	18.7-17.8	7-10	25-29	3.47-3.27
	3	4.4 & less	177 & above	2.77 & above	17.7 & less	11 & above	30 & above	3.26 & less
9 years	1	5.1-4.7	139-159	2.51-2.82	19.3-18.5	5-7	23-27	4.03-3.37
	2	4.6-4.3	160-179	2.83-3.13	18.4-17.6	8-11	28-32	3.36-3.16
	3	4.2 & less	180 & above	3.14 & above	17.5 & less	12 & above	33 & above	3.15 & less
10 years	1	4.9-4.5	149-163	2.66-3.13	19.1-18.2	6-8	27-31	3.52-3.31
	2	4.4-4.1	164-179	3.14-3.59	18.1-17.4	9-12	32-36	3.30-3.11
	3	4.0 & less	180 & above	3.60 & above	17.3 & less	13 & above	37 & above	3.10 & less
11 years	1	4.8-4.4	156-176	2.83-2.96	18.4-17.7	7-9	30-35	3.36-3.21
	2	4.3-3.9	177-200	2.97-3.43	17.6-17.0	10-13	36-41	3.20-3.05
	3	3.8 & less	201 & above	3.44 & above	16.9 & less	14 & above	42 & above	3.04 & less
12 years	1	4.7-4.3	164-186	2.97-3.28	18.0-17.4	8-10	31-36	3.29-3.14
	2	4.2-3.8	187-209	3.29-3.97	17.3-16.7	11-14	37-43	3.13-3.01
	3	3.7 & less	210 & above	3.98 & above	16.6 & less	15 & above	44 & above	3.00 & less
13 years	1	4.2-4.0	171-191	3.01-3.62	17.6-17.0	9-11	33-39	3.23-3.09
	2	3.9-3.6	192-214	3.63-4.23	16.9-16.3	12-15	40-45	3.08-2.53
	3	3.5 & less	215 & above	4.24 & above	16.2 & less	16 & above	46 & above	2.52 & less
14 years	1	4.1-3.8	181-200	3.19-3.80	17.1-16.6	10-12	36-42	3.14-2.58
	2	3.7-3.4	201-220	3.81-4.41	16.5-16.1	13-16	43-49	2.57-2.41
	3	3.3 & less	221 & above	4.42 & above	16.0 & less	17 & above	50 & above	2.40 & less
15 years	1	3.7-3.6	201-215	3.81-4.09	16.4-16.3	11-13	38-45	3.07-2.56
	2	3.5-3.3	216-225	4.10-4.59	16.2-16.0	14-17	46-52	2.55-2.33
	3	3.2 & less	226 & above	4.60 & above	15.9 & less	18 & above	53 & above	2.32 & less
16 years	1	3.5-3.4	216-231	4.10-4.39	16.2-16.1	12-14	51-52	2.55-2.41
	2	3.3-3.2	232-235	4.40-4.79	16.0-15.9	15-18	53-55	2.40-2.29
	3	3.1 & less	236 & above	4.80 & above	15.8 & less	19 & above	56 & above	2.28 & less
17 years	1	3.3-3.2	232-235	4.40-4.69	16.0-15.9	13-15	53-54	2.39-2.28
	2	3.1-3.0	236-240	4.70-5.07	15.8-15.7	16-19	55-57	2.27-2.24
	3	2.9 & less	241 & above	5.08 & above	15.6 & less	20 & above	58 & above	2.23 & less
18 years	1	3.1-3.0	236-240	5.0-5.29	15.8-15.7	14-16	55-57	2.26-2.23
	2	2.9-2.8	241-244	5.30-5.57	15.6-15.5	17-20	58-60	2.22-2.18
	3	2.7 & less	245 & above	5.58 & above	15.4 & less	21 & above	61 & above	2.17 & less
19 years	1	3.0-2.9	241-244	5.30-5.79	15.6-15.5	15-17	58-60	2.22-2.20
	2	2.8-2.7	245-248	5.80-6.26	15.4-15.3	18-21	61-64	2.19-2.17
	3	2.6 & less	249 & above	6.27 & above	15.2 & less	22 & above	65 & above	2.16 & less



**BATTERY OF TESTS AND NORMS FOR SCOUTING  
TALENT IN SPORTS  
GIRLS**

Age	Marks	30 M FLYING START (SEC.)	S.B.JUMP (CM)	Medicine Ball put upto 10 yrs -1 kg. Above-2Kg (mtrs.)	6 x 10m Shuttle Run. (Sec.)	Forward Bend & Reach (cm)	S.V Jump (cm)	800m. Run (Min.Sec.)
8 years	1	5.6-5.2	114-130	1.80-2.13	20.5-19.7	4-6	19-21	5.07-4.31
	2	5.1-4.7	131-146	2.14-2.47	19.6-18.9	7-10	22-25	4.30-3.54
	3	4.6 & less	& above	2.48 & above	18.8 & less	11 & above	26 & above	3.53 & less
9 years	1	5.4-4.9	123-140	2.02-2.40	20.4-19.6	5-7	20-24	4.45-4.13
	2	4.8-4.5	141-159	2.41-2.80	19.5-18.7	8-11	25-29	4.12-3.40
	3	4.4 & less	160 & above	2.81 & above	18.6 & less	12 & above	30 & above	3.39 & less
10 years	1	5.2-4.8	129-149	2.21-2.69	20.2-19.3	6-8	23-27	4.34-4.05
	2	4.7-4.3	169 170 & above	2.70-3.18	18.3	9-12	28-32	4.04-3.34
	3	4.2 & less	& above	3.19 & above	18.2 & less	13 & above	33 & above	3.33 & less
11 years	1	4.9-4.6	136-151	2.41-2.84	19.4-18.6	7-9	25-30	4.29-3.56
	2	4.5-4.2	175 176 & above	2.85-3.29	18.5-17.8	10-13	31-36	3.55-3.25
	3	4.1 & less	& above	3.30- & above	17.7 & less	14 & above	37 & above	3.24 & less
12 years	1	4.8-4.5	146-165	2.51-2.94	19.3-18.5	8-10	28-32	4.19-3.50
	2	4.0 3.9 & less	185 186 & above	2.95-3.39	17.5	11-14	33-37	3.49-3.16
	3	& less	& above	3.40 & above	17.4 & less	15 & above	38 & above	3.15 & less
13 years	1	4.4-4.2	151-168	2.56-3.02	18.6-18.0	9-11	30-33	4.14-3.41
	2	3.9 3.8 & less	189 190 & above	3.03-3.49	17.9-17.3	12-15	34-39	3.40-3.06
	3	& less	& above	3.50 & above	17.2 & less	16 & above	40 & above	3.05 & less
14 years	1	4.2-4.0	153-170	2.61-3.09	18.5-17.9	10-12	32-34	4.09-3.33
	2	3.7 3.6 & less	192 193 & above	3.10-3.59	17.8-17.2	13-16	35-40	3.32-2.96
	3	& less	& above	3.60 & above	17.1 & less	17 & above	41 & above	2.95 & less
15 years	1	4.0-3.8	170-187	2.65-3.13	18.2-17.7	11-13	36-38	3.33-3.17
	2	3.7 3.4	188-197	3.14-3.63	17.6-17.0	14-17	39-41	3.16-2.56
	3	3.3 & less	198 & above	3.64 & above	16.9 & less	18 & above	42 & above	2.55 & less
16 years	1	3.8-3.6	188-194	2.70-3.18	18.1-17.45	12-14	39-40	3.16-2.56
	2	3.5-3.3	195-205	3.19-3.68	17.44-16.8	15-18	41-42	2.55-2.49
	3	3.2 & less	206 & above	3.69 & above	16.7 & less	19 & above	43 & above	2.48 & less
17 years	1	3.6-3.4	190-199	2.75-3.23	17.6-17.0	13-15	41-42	3.14-2.54
	2	3.3-3.1	200-215	3.24-3.73	16.9-16.5	16-19	43-44	2.53-2.45
	3	3.0 & less	216 & above	3.74 & above	16.4 & less	20 & above	45 & above	2.44 & less
18 years	1	3.4-3.2	201-218	2.80-3.28	17.4-16.8	14-16	43-44	3.12-2.53
	2	3.1-2.9	219-227	3.29-3.78	16.7-16.1	17-20	45-46	2.52-2.40
	3	2.8 & less	228 & above	3.79 & above	16.0 & less	21 & above	47 & above	2.39 & less
19 years	1	3.3-3.0	224-230	2.85-3.33	16.0-15.8	15-17	45-46	3.10-2.50
	2	2.9-2.7	231-239	3.34-3.83	15.7-15.6	18-21	47-48	2.49-2.25
	3	2.6 & less	240 & above	3.84 & above	15.5 & less	22 & above	49 & above	2.24 & less

