

PHYSICAL FITNESS TESTS

A set of 10 Physical Fitness Tests shall be performed on all athletes across all disciplines. The details of the tests shall be as follows:

1. Height
2. Weight
3. Flexibility (Sit & Reach)
4. Strength – Lower Body/Explosive (Standing Vertical Jump)
5. Strength – Lower Body / Explosive (Standing Broad Jump)
6. Strength – Upper Body (Medicine Ball Throw)
7. Speed (30 Mts standing Start)
8. Agility (4 x 10 Mts Shuttle Run)
9. Sit Ups
10. Endurance (800m Run for U-12, 1.6km run for 12+years)

Test No. 1: Height

Objective: To measure perpendicular distance from the feet contacting standing surface to the vertex.

Equipment: Stadiometer (or steel ruler or tape measure placed against a wall)

Procedure: The bare footed athlete should stand straight against a stadiometer, touching the stadiometer with heels, buttocks and upper back. The feet together, and arms by the sides, should also be in contact with the wall when the measurement is made. Shoulders are held comfortably and arms hang at sides with palm facing the thighs. An instruction will be given to the subject to stretch up without raising heels and hold full breath. The ruler of the stadiometer will be lowered until it touches the vertex of the head firmly but without exerting extreme pressure.

Scoring: The measurement will be recorded in centimeters.

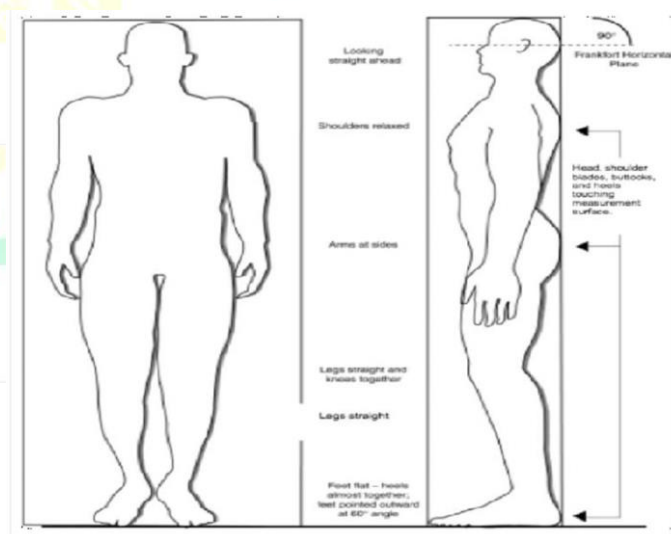


Figure -1

Test No. II: Weight

Objective: To measure the mass of the body of the athlete.

Equipment: A standardized electronic weighing machine.

Procedure: The athlete, in minimal clothing should stand barefoot at the center of the platform of the weighing machine. He or she will assume a still position with arms by the sides.



Figure -2

Scoring- the weight of the athlete will be recorded from the display panel of the weighing machine in 1/10th of a kilogram.

Test No. III: Sit and Reach Test

Objective: To measure hip and trunk flexibility of the athlete.

Equipment: Sit and reach box (or alternatively a ruler can be used, and a step or box)

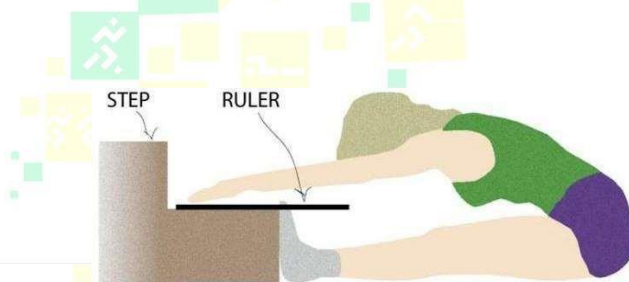


Fig 3. Sit & Reach Test

Procedure: The athlete will be directed to remove his/her shoes and sit on the floor with feet against the testing apparatus. The apparatus is placed against a wall to prevent it from sliding. The athlete fully extends his/her legs with feet about shoulder width apart. Both knees should be locked and pressed flat to the floor - the tester may assist by holding his/her knees down. The subject then bends forward with the palms facing downwards and the hands placed on top of each other or side by side, the subject reaches forward along the measuring line as far as possible. The athlete reaches out and holds that position for one-two seconds while the distance is recorded. Make sure there are no jerky movements.

Scoring: The athlete can avail three trials and the maximum distance reached out of three trials will be recorded in centimeters.

Test No. IV: Standing Vertical Jump

Objective: To measure the explosive power

Equipment: Measuring Tape, Bench, Chair, Chalk Powder and Duster.

Marking: A vertical wall is prominently marked in centimeters up to 3.50 meters

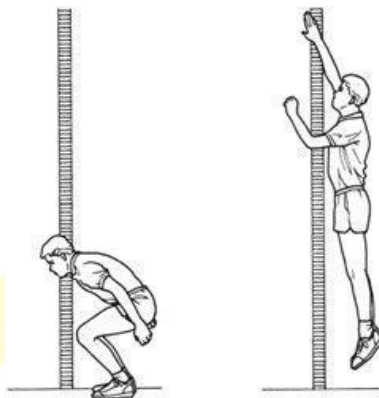


Fig 4. Vertical Jump

Procedure: The athlete is instructed to stand side-wise against the marked wall, keeping the dominant arm raised and stretched completely above the head. He/she will then touch the marked scale on the wall with the tip of the middle finger without raising heels. The point the athlete touched with the tip of the middle finger is recorded in centimeters as **standing reach** of the subject.

Then the athlete dips his or her fingers in chalk powder and stand side on to the marked wall. The athlete is instructed to jump for maximum vertical height with forceful extension of knees and arm swing to touch the highest possible reach at the marked scale. He/she should jump from the spot without shuffling of feet and approach steps.

The reading shall be noted by keeping eyes in level with the chalk mark on the progressed marking on the wall.

Three attempts will be permitted to the athlete and the best jump will be considered as the score of vertical jump in centimeters.

Scoring: To compute vertical jump score in centimeters, the standing reach will be subtracted from vertical jump reach

Test V: Standing Broad Jump

Objective: To measure explosive Legs strength and body coordination

Equipment: Floor/ Ground, Measuring Tape, Marker



Fig 5. Standing Broad Jump

Procedure: 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 backward. Three attempts are allowed. The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Three attempts one after the other are given. All the three are measured and recorded.

Scoring: The greatest distance jumped out of three attempts, will be the score of the athlete in centimeters.

Test VI: 30 M Standing Start

Objective: To measure speed of the athlete.

Equipment: 30 meters marked track, stopwatch, cone markers, flat and clear surface of at least 60 meters.

Procedure: After a short warm up the athlete takes a position behind the starting line. On the starters command “ready” and “go” the athlete will run across the finishing line down at 30 meters from the starting line as fast as possible. Only one participant runs at a time. Two trials are allowed.

Scoring: The timing begins at the first movement of an athlete and ends when the athlete's torso crosses the vertical line of the finish line. The best time out of two attempts will be recorded, rounded to the nearest one-tenth of a second.

Test No. VII: Backward Overhead Medicine Ball Throw

Objective: To measure the Dynamic Back Strength

Equipment: Steel Measuring Tape, Nails, Marking Powder, Medicine ball 1Kg / 2Kg and open throwing arena for testing.

Procedure: The athlete will begin by standing with his/her back facing the direction of the throw, with their heels at the starting line. In the preliminary action, the athlete will hold the medicine ball in both hands with arms fully extended. The movement involves bringing the ball up to chest height with extended arms and then swinging it downward between the legs by flexing the knees. Without any pause in the motion, athlete will quickly bring the ball back over and behind him/her, releasing it above his/her head while leaning the body backward. This movement should be executed with power and explosiveness, involving the extension of the legs, hips, and the body in a backward arch position. The athlete is permitted to fall backward over the line after releasing the ball.

Weight of Medicine Ball: 1 kg medicine ball shall be used for girls and under 12 boys category, whereas for boys above 12 years the weight of the medicine ball shall be 2 kg.



Figure -6. Medicine Ball Throw

Number of Attempts: Each athlete will be given two attempts to perform the throws. In cases of valid reason, such as a fault or interruption, a third attempt will be granted.

Scoring: The best distance covered by the medicine ball, from the point of release to the nearest breaking point on the ground, will be recorded in meters and centimetres.

Test No. VIII: 4X10 M Shuttle Run

Objective: To determine agility of the athlete.

Equipment: Stop watch, lime powder and a running course of 10 meters. Surface of the course should be non-slippery.

Marking: 10 meters of distance is marked by two parallel lines of 5 meters each.

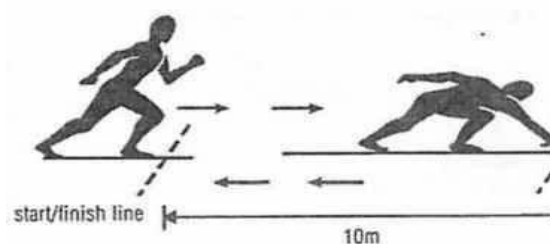


Fig.7 Shuttle run test

Procedure: The athletes (2 together) stand behind the starting line. On the command of starting signal “GO”, athletes run faster, go nearest to the other line and touch it with the one hand, turn and come back to starting line, touch it with hand, turns and repeat it for a total of 3 times and 4th time, run over the line as fast as possible. Two chances are permitted.

Scoring: The better time taken by the athlete to complete the course of 4 X10 meters to the nearest 1/ 10 of a second out of two trials is recorded as score of the test.

Test No. IX: Sit Ups

Objective: To measure Abdominal Strength

Equipment: Clean Floor, mat or dry turf and Stop Watch

Procedure: The athlete lies on his/her back with knees bent, feet on the floor and heels not more than 12 inches from the buttocks. The angle at the knees should be less than 90 degrees. The athlete puts his hands on the back of his/her neck with fingers clasped and places his elbows squarely on the mat, floor or turf. His/her feet are held by his/her partner to keep them in touch with the surface. The athlete tightens his/her abdominal muscles and brings his/her head and elbows forward as he/she curls up, finally touching elbows to knees. This action constitutes one sit up. The athlete returns to the starting position with his/her elbows on the surface before he/she sits up again. The timer gives the signal “ready-go” and the sit-up performance is started on the word “go”. Performance is stopped on the word “stop”. The watch is started on the word “go” and stopped on the word “stop”.

Duration of the Test: The number of correctly executed sit-ups performed in 30 seconds shall be counted as score of the athletes below 12 years and in 45 seconds for above 12 years.



Figure 8: Sit Ups

Rules:

1. Only one trial shall be allowed unless the tester believes the athlete has not had a fair opportunity to perform.
2. No resting between sit-ups is permitted.
3. No sit up shall be counted in which the athlete does not:
 - a) Keep the fingers clasped behind the neck.
 - b) Bring both elbows forward in starting to sit-up without pushing off the floor with the elbow.
 - c) Return to starting position, with elbows flat on the surface before sitting up again.

Scoring: the number of correctly executed sit ups the athlete is able to do within stipulated duration shall be recorded as the score of the athlete. A foul nullifies the count for that sit up.

Test No. X: Endurance Run (800 M for U-12 and 1.6km above 12 years)

Objective: To Estimate aerobic capacity

Equipment: Stopwatch, 1600 meter flat and even surface/ athletics Track, tape / cones (for marking), measuring wheel (if no stadium available)

Procedure: After a warm up the athletes are asked to line up in a standing start position at the 400m start at a regular stadium (400m round). If a stadium is not available, the tester has to ensure that there is another possibility to measure the exact distance of 1,600m (e.g. using a measuring wheel).

On the starters command ready and clap/sound of starting signal, the athlete will run the 1.6km as fast as possible. Only one attempt is given to the athletes.

Scoring: The performance will be measured by using stopwatch and recorded in $1/10^{\text{th}}$ of a second.



Figure 9: Endurance Run