

CBSE Test Paper 04
CH- 06 Test and Measurement in Sports

1. What do you mean by flexibility?
2. What is Rockport fitness walking Test?
3. Which test will you suggest to measure general motor ability?
4. Which motor quality does a senior citizen lack who finds difficulty in tying the shoe laces while sitting on a chair?
5. We generally use Harvard step test for cardiovascular fitness, In this test how do we calculate the physical efficiency index (PEI)?
6. Explain Rikli and Jones chair-stand test for lower body strength development.
7. List down the fitness index score of Harvard Step Test?
8. Explain the procedure of Eight foot up and go test for senior citizens.
9. Explain the measurement of cardiovascular fitness Harvard Step Test.
10. How the cardiovascular fitness is measured with the help of 'Harvard Step Test'?
Write in detail about its administrative procedure.

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Answer

1. The range of movements of joints is called flexibility
2. Rockport Fitness Walking Test : This test is very good to measure Cardio-Respiratory fitness of the individual. Thus the objective of this test is to monitor the development of the athlete's maximum Cardio-Respiratory ability (VO₂).
3. Barrow's (three item) general motor ability test.

4. The senior citizen lacks lower body flexibility if they have difficulty in tying laces of shoes.

5. In the Harvard step test for cardiovascular fitness, the physical efficiency index

PEI= (Duration or exercise in seconds x 100) divided by 2× Sum of pulse counts in recovery

6. 30 seconds chair-stand test (1999)

Chair height 17" (43 cm), placed against wall for stability.

Starting position: Sitting in the middle of the chair, back straight, arms crossed over chest, feet flat on floor.

- i. Take resting vital signs.
- ii. Demonstrate the movement first slowly, then quickly.
- iii. Practice one or more repetition before actual start of test to check balance.
- iv. On the signal 'go' the candidate comes to a full stand, then returns to fully seated position, as many times as possible in 30 seconds.
- v. position, as many times as possible in 30 seconds.
- vi. If a person is more than half way up at the end of 30 seconds count it as full stand

Scoring: The number of stand-ups in 30 seconds. Scores less than 8 stand-ups were associated with lower levels of functional ability. pushing off with the arms is not allowed.

7. The fitness index score of Harvard Step Test:

Rating	Fitness Index	Rating	Fitness index
Excellent	>96	Below average	54-67
Good	83-96	Poor	<54
average	68-82	.	.

8. Procedure: Keep chair next to the wall and the marker, 8 feet in front of the chair. The participant starts completely seated, with hands resting on the knees and feet flat on the ground. On the command 'go' stopwatch is started and the participant stands and walk (on running at all) as quickly as possible to and around cone and returns to the

chair to sit down. Time is noted as he sits down on the chair. Two trials are given to the participant.

9. **Harvard Step Test:-** The Harvard Step Test is a test that measures cardiovascular fitness. The equipment required to perform the test are bench 20' inches high, stopwatch and metronome. This test requires the athlete to step up and down off a gym bench for 5 minutes at a rate 30 steps/minute which measures the Aerobic fitness test. After the workout, timing, heart rate, has to be measured. The athlete steps up and down onto a standard gym bench once every two seconds for five minutes (150 steps), The assistant stops the test after 5 minutes.

As soon as he stops exercising. The assistant measures the athlete's heart rate (bpm) one minute after finishing the test – Pulse1 The assistant measures the athlete's heart rate (bpm) two minutes after finishing the test – Pulse2 The assistant measures the athlete's heart rate (bpm) three minutes after finishing the test – Pulse3 b. Rock fort one mile test- Main objective to check the development of vo2 max.

The Physical Fitness Index (PFI) is computed using the formula

$$\text{Formula} = \frac{\text{Duration of exercise in seconds} \times 100}{2 \times \text{Sum of pulse counts in recovery}}$$

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10. **Harvard Step Test** is a test to measure **cardiovascular fitness** with the help of a 20 inches high bench, a stopwatch and a metronome.

Administrative procedure :- This test requires the athlete to step up and down off a gym bench for 5 minutes at a rate 30 steps/minute which measures the Aerobic fitness test. After the workout, timing, heart rate, has to be measured. The athlete steps up and down onto a standard gym bench once every two seconds for five minutes (150 steps),

The stepping process is performed in four parts in the following sequence

- i. One foot is placed on the bench.
- ii. One foot is placed on the floor
- iii. The other foot is placed on the bench.
- iv. The other foot is placed on the floor.

The performer may lead with either foot and can change as long as the four parts of the test are maintained. The stepping exercise continues for exactly 5 minutes. unless the performer is forced to stop sooner because of exhaustion. As soon as he stops exercising. the performer sits on a chair quietly while pulse rates are counted 1 to $1\frac{1}{2}$, 2 to $2\frac{1}{2}$ and 3 to $3\frac{1}{2}$ minutes after the exercise.

A Physical Fitness Index (PFI) is computed, utilising the following formula

$$\text{PFI} = \frac{\text{Duration of exercise in seconds} \times 100}{2 \times \text{Sum of pulse counts in recovery}}$$

Rating	Fitness Index	Rating	Fitness index
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