

CBSE Test Paper 03
CH- 12 Training in Sports

1. What is strength endurance ?
2. Define active flexibility.
3. Define Interval Training
4. What are pace races?
5. Enlist the methods of Speed development.
6. Suggest different ways to improve reaction ability of a player.
7. What do you mean by Isometric Exercises?
8. What is strength? Discuss any two types of exercises used for strength development.
9. What do you mean by coordinative abilities and elaborate on the types of coordinative abilities?
10. Suggest various methods for flexibility training to improve the optimum flexibility.

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Answer

1. Strength endurance is the ability to overcome resistance under conditions of fatigue.
2. It is one of the classification of flexibility. It is the ability of the body to perform movements with greater amplitude and range without external help. Example: performing stretching exercise without the help of partner
3. Interval Training Method: This training method is very useful for the development of endurance. This training method is based on the principle effort and recovery and effort again.
For example: 250 meters sprint 150 meters walk, 250 meters sprint 150 meters walk. This 150 meters walk or jog before the next repetition is called interval between specified workout.
4. A pace race generally means running a race of 800 meters or more at a uniform speed, with another athlete running 10-15 meters ahead of the other athletes who set the pace of running.
5. The two methods of speed development are: Acceleration runs and Pace races or runs.
6. Improved reaction ability is a performance prerequisite to do motor actions under given conditions in minimum time. There are two methods for improving this. They are
 1. Acceleration runs– It is the ability to increase speed from jogging to running and finally sprinting. It depends on explosive strength, the frequency of movement & to attain maximum speed from a stationary position this is practiced after learning proper technique.
 2. Pace run or races– A competitive pace race is a timed race in which the objective is not to finish in the least time, but to finish within the prescribed time and in the best physical condition. In some races, the prescribed time is very narrowly defined and the winner is the competitor who finishes closest to the prescribed time. Complete recovery is ensured between two repetitions. This means to run the whole distance of a race at a constant speed. In this, the athlete runs the race with the uniform.

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7. **ISOMETRIC EXERCISE:** Isometric exercises are those exercises, which are not visible. In fact there are no direct movements, hence they can't be observed. In these exercises, work is performed but is not seen directly. In these exercises, a group of muscles carry out tension against the other group of muscles. For example, pushing against a sturdy wall. What do you mean by and Isotonic exercises.
8. **Strength** it is the ability of muscles to overcome resistance. It is the ability of an individual to work against resistance, e.g. various throws and jump events, swimming etc.

Types of exercises for strength development are:

1. **Isometric Exercises or Static Contraction** The literal meaning of the word isometric is constant length, i.e. iso means constant and metric means length. In this contraction, muscles work against a resistance but there is no change in the length of muscle. No external movement is visible to a third person, e.g. leg press, pushing a wall, squat position, holding leg at 45°.
2. **Isokinetic Exercises** the literal meaning of the term isokinetic is constant speed, i.e. iso means constant and kinetic means motion.

It is defined as maximal contraction with constant speed over the full range of movement, e.g. cycling, arm stroke in butterfly style swimming etc.

9. **Coordination** is the ability to repeatedly execute a sequence of movements smoothly and accurately. This may involve the senses, muscular contractions and joint movements. Everything that we participate in requires the ability to coordinate our limbs to achieve a successful outcome – from walking to the more complex movements of athletic events like the pole vault. Basic coordination abilities: Adaptive ability enables modifications of motor activity on the basis of comparison or anticipation of new or changing conditions during performing motor activity. Balance ability is understood as an ability to keep body or its parts in a relatively stable position. Combinatory ability is understood as an ability to simultaneously put partial movements together into more complex movement structures. Orientation ability is an ability to realize position of the body or its parts in space and time. Rhythm ability enables to grasp and meteorically express rhythm which is externally determined or contained in the motor activity it self.
10. Following are the stretching ways for flexibility development:
Active stretching is where you are taking the muscle beyond its normal range of

motion with assistance (PNF or with the help of a partner)

Passive stretching allows the muscles and tendons to stretch naturally without the use of additional forces acting on the muscle/tendon. The flexibility gains are not as great with passive stretching as it is with active stretching.

1. Static stretching is a technique where the muscle is slowly stretched and then held in the stretched position for several seconds. This type of stretching allows the muscle to be relaxed so that a greater length can be achieved. It is the most frequently.
2. Used and most recommended type of stretching. There is a low risk of injury with this technique.
3. PNF stretching is much longer stretching session when compared to the other types. It requires a partner's help to utilize this technique. The use of a partner is so that there can be a contraction and relaxation phase. This type of stretching is actually the most effective form of stretching, but it is also considered the most painful type of stretching,
4. Dynamic stretching is a technique that many athletes should be accustomed to. This type of stretching can be in the form of leg swing walks or carioca just to name a few. This is a great way for teens to work on their flexibility in a fun way. It allows them to be active and it can be done with groups and teas. This type of stretching goes for more than two seconds and is done without stopping the movement.
5. Ballistic stretching is a type of stretching, but it is not recommended for improving flexibility. This type of stretching could lead to muscle soreness and injury because it is possible that this technique could cause small tears in soft tissue due to the bouncing movements that force the muscle to lengthen. Ballistic stretching due to the bouncing, could stretch ligaments too far if the movement is not controlled.