

**PHYSICAL EDUCATION PRACTICAL**

**CLASS - XII**

**Project File (About one sport/game of student choice)**

**(1) Volleyball**

**(2) Basketball**

**(3) Football**

**(4) Handball**

**(5) Hockey**

**(6) Kho-Kho**

# VOLLEYBALL

## HISTORY OF VOLLEYBALL

In 1895 William G. Morgan (America) invented new indoor game called "Mintonette" which became volleyball. Volleyball was a demonstration sports in 1924 olympic (Paris) and became an official sports in 1947. When the federation international de volleyball (FIVB) was formed in 1949. First men's world championship was played in Prague. Volleyball was a part of the olympic game Tokyo in 1964. The men's world league was set up in 1990.

Today a new form of volleyball is popular. It is known as Beach volleyball. In India volleyball came to existence through Y.M.C.A and later volleyball federation of India (F.V.I.) was formed in 1950. India won the gold medal in the first Asian games. An Indian team selected at Kolkata in 1952. This team took part in the world volleyball championship at Moscow.

## BASIC RULES OF VOLLEYBALL

### 1. Playing Area:

The playing court is rectangle measuring 18x9m, surrounded by a free zone which is a minimum of 3m wide on all sides.

### 2. Lighting :

The lighting on the playing area should be 1000 to 1500 lux measured at 1m above the surface of the playing area.

### 3. Antenna :

An antenna is a flexible rod, 1.80m long and 10mm in diameter, made of fiberglass or similar material.

An antenna is fastened at the outer edge of each side band. The antenna are placed on opposite side of the net.

The top 80 cm of each antenna extends above the net and is marked with 10cm stripes of contrasting colour, preferable red and white.

### 4. Team:

A team may consist of a maximum of 12 players. However there must always be six players per team in play and six are substitutes. A team has the option to name one sepecilised definsive player called "LIBERO".

### 5. Temperature :

The minimum temperature shall not be below 16°C and the maximum temperature shall not be higher than 25°C.

### 6. Side Band :

Two white bands are fastened vertically to the net and placed directly above each side line. They are 5 cm wide and 1m long and are considered as part of the net.

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**7. SCORING :**

Volleyball match consist of 5 sets. First four sets consists of 25 points each and fifth set is of 15 points. The team which reaches first at this score becomes winner of the set and the team which wins 3 sets will become the winner of the match.

**8. ROTATION :**

After the change of every service, the opposite team serves the ball but before serving each player rotates in a clockwise direction. The right forward takes the place of right back and right back takes the place centre back. All the player will rotate in the same manner.

**9. SUBSTITUTION :**

A maximum of six players can be changed in a set. Even all the six substitutions can be done at once. Substitution could be possible only when the ball is dead.

**10. TIME-OUT :**

Each team is allowed to take two time out in a set. The duration allowed for time out is 30 second.

**11. THE BALL :**

The ball should be made up of permissible material. It should be spherical and have a circumference of 65 to 67 cm and weight 260-280 gm.

**12. LIBERO :**

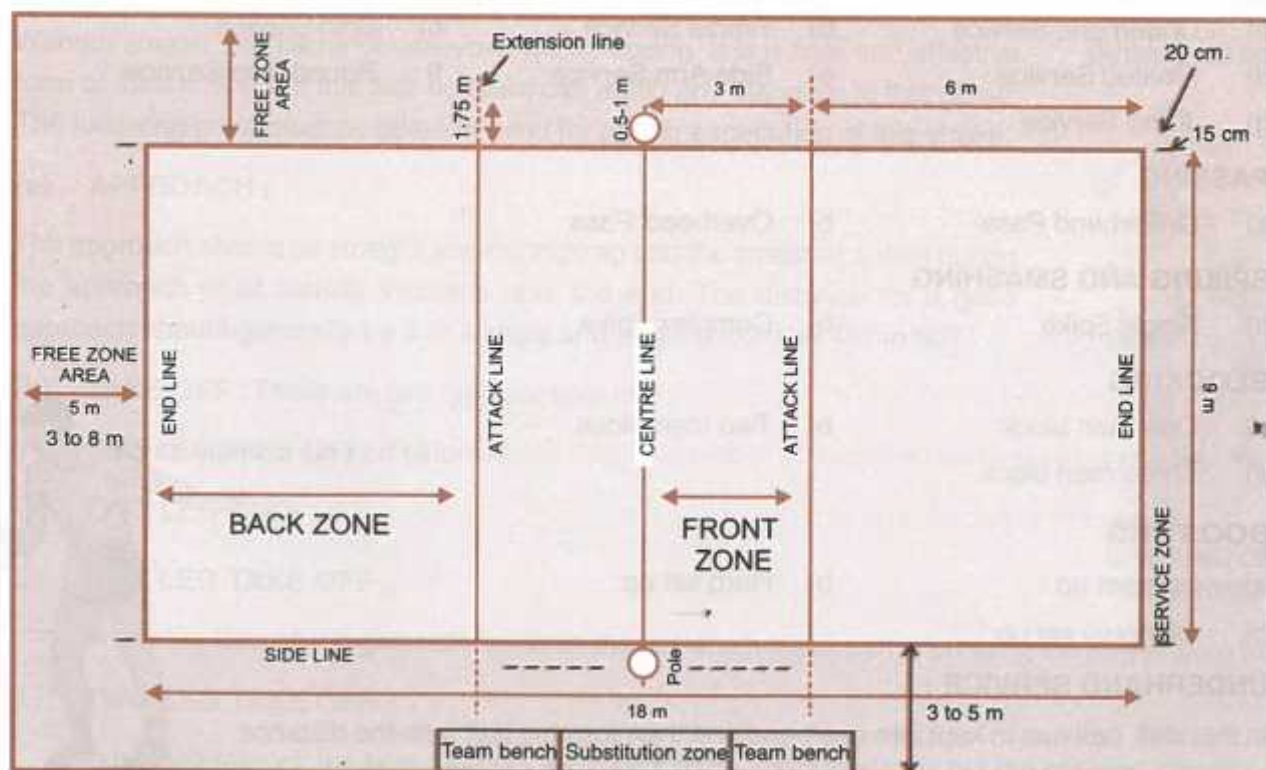
One Player called "Libero" can be changed unlimited time but he can play in back zone only. He may not serve and block. He/She should wear different kit to his team mates.

**LATEST GENERAL RULES RELATED TO VOLLEYBALL**

1. Now the breadth of service area is 9m instead of 3m.
  2. According to the new rule, libero is a special player in a team.
  3. Each service has a point as in table tennis.
  4. Fifth set consists of 15 points.
  5. Let service is allowed.
  6. The first service can be recieved by any part of body but it should be only a single touch.
  7. A coloured ball is permitted in competition.
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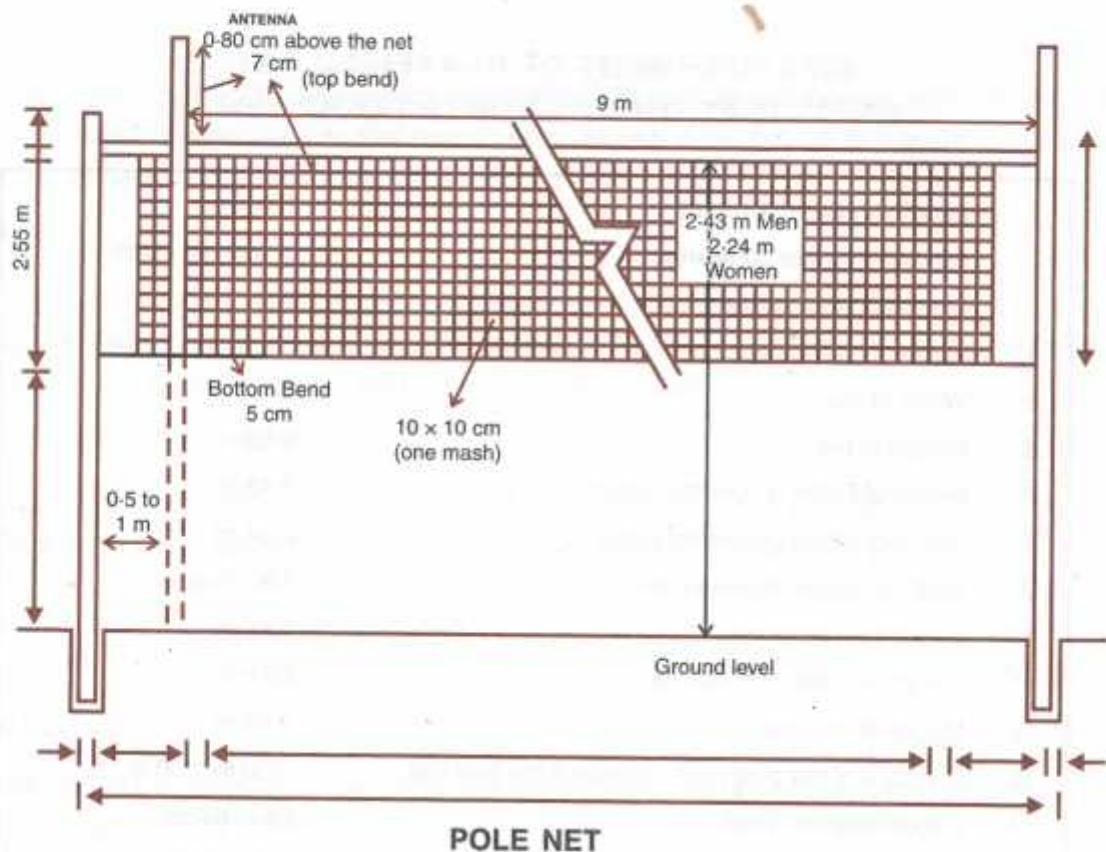
## MEASUREMENT OF PLAYFIELD AND SPECIFICATION OF SPORTS EQUIPMENTS

1. Length and width of court	: 18x9 m
2. Surrounding free zone area	: 3 m on all sides
3. Length of service line	: 9 m
4. Width of all lines of court	: 5 cm
5. Width of net	: 1m
6. Length of net	: 9.50 m
7. Net height from ground for (boys)	: 2.43 m
8. Net height from ground for (girls)	: 2.24 m
9. Mesh of square between net	: 10x10 cm
10. Diameter of antenna	: 10 mm
11. Length of antenna above net	: 80 cm
12. Height of the post	: 2.55 m
13. Distance of the post from outside of the side line	: 0.50 to 1.00 m
14. Circumference of ball	: 65 to 67cm
15. Weight of the ball	: 260 to 280 gm
16. Air pressure inside a ball	: 0.30 to 0.325 kg/cm <sup>2</sup>



**VOLLY BALL COURT**





### FUNDAMENTAL SKILL

- a) Underhand Service      b) Tennis Service      c) Spin Service  
d) Floated Service      e) Side Arm Service      f) Round arm Service  
g) Jump Service

- a) Underhand Pass                      b) Overhead Pass

- a) Single Spike                      b) Complex Spike

- a) One men block                      b) Two men block  
e) Three men block

- a) Low set up                      b) Hard set up  
c) Diagonal set up

In this skill, ball has to kept into one hand and then toss the ball upto the distance of our toe, from our body when the ball comes down at the waist level hit the ball with the palm.

### Under Hand Service

## 2) TENNIS SERVICE :

In this service, firstly we should toss the ball up above the face and hand which is going to hit the ball which should be brought from behind and it should hit the ball, above our forehead and it should be hit with our palm. Only then we should bring our leg forward as follow through.



TENNIS SERVICE

## 3) UNDERHAND PASS :

It means to lift the ball under your hand while doing so. Your stance should be that your one leg be slightly forward and your knees bend and your body should be slight forward but player has to keep his back straight and hand should be straight as well while facing the ball, then execute the follow-up.



UNDERHAND PASS

## 4) OVERHEAD PASS :

This is also very important skill in volleyball. In this skill player tosses the ball from above the head. In this skill firstly the player should come under the ball as the ball drops on his forehead after the taken position, the player should pass the ball without holding it.



OVERHEAD PASS

## 5) SPIKING OR SMASHING :

Without smash, the game of volleyball will be boring. It is a final and effective form of attack. Without this skill no team can attain any standard in this game. The following point must be taken in mind for proper execution of this stroke.

### (a) APPROACH :

The approach should be straight and not zig-zag and the smasher speed during the approach must standly increase upto the end. The distance for a good approach should generally be 3 to 4 steps and angle should be  $45^{\circ}$  to  $60^{\circ}$ .

### (b) TAKE OFF : There are two types of take off

#### i) ONE LEG TAKE OFF

#### ii) TWO LEG TAKE OFF

##### i. ONE LEG TAKE OFF

In one leg take off it is generally towards the net which takes part in bringing the player jump height.

##### ii. TWO LEG TAKE OFF

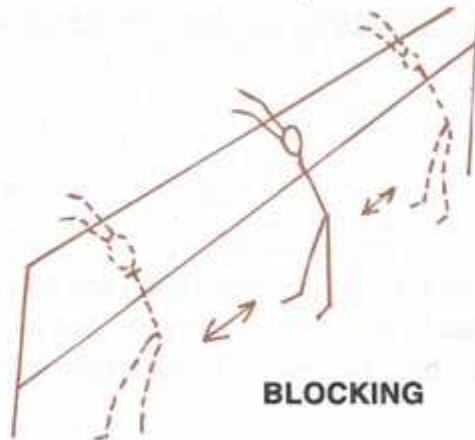
In two leg take off the legs are bent as knee's at an  $\angle 90^{\circ}$  to  $\angle 110^{\circ}$  but the hip joint should not be below the knee.



SPIKING OR SMASHING

## 6. **BLOCKING:-**

Blocking is the action of player close to the net to intercept the ball coming from the opponent by reaching higher than the top of the net. Only front row players are permitted to complete a block.



## **TERMINOLOGIES**

1. **BLOCK :**  
A defensive player, attempting to block or stop the returning ball over or near the net.
  2. **ROLL :**  
A defensive maneuver to recover a ball, rolls may be executed in all the direction for recovery.
  3. **COVER :**  
Being positioned behind a spike or a block to field a ball glancing off a team member.
  4. **VIOLATION :**  
A foul, such as a lift, double hit or four hits on one side.
  5. **RUN THROUGH :**  
A passing skill used to play a dropping ball while remaining on your feet.
  6. **SWITCH :**  
A change of playing position on the court for strategic reason.
  7. **HANDLING :**  
Is another name for passing. It refers to taking control of the ball and passing it to another player of his own side.
  8. **SPIKE :**  
A ball hit forcibly from a height above the net.
  9. **SIDE OUT :**  
Ending of a team's right to serve because of an infringement of a rule.
  10. **FOOT - FAULT :**  
To step on or over the endline before or during the service or to step completely over the centreline.
-



**11. KILL :**

A spike that is impossible to return.

**12. ACE :**

A service that lands in the opponent's court without being touched.

**13. DEAD BALL :**

Ball that is out of play.

**IMPORTANT TOURNAMENTS**

- |  |  |
|--|--|
| 1. World Volleyball Championship                 | 2. Olympic Volleyball Championship         |
| 3. National Volleyball Championship              | 4. All India Inter-University Championship |
| 4. National School Games Volleyball Championship | 6. Federation Cup                          |
| 7. Grand Champions Cup                           | 8. Asia Cup                                |
| 9. Shiwani Gold Cup                              | 10. Poornima Trophy                        |
| 11. India Gold Cup                               | 12. Canada Open                            |
| 13. Italian Open                                 | 14. New Zealand Open                       |
| 15. Hamburg Open                                 |  |
| 16. Commonwealth Volleyball Championship         |  |

**1. WORLD VOLLEYBALL CHAMPIONSHIP :**

The first world Volleyball Championship was held in the year 1949 in Prague.

**2. OLYMPIC VOLLEYBALL CHAMPIONSHIP :**

Volleyball became a part of olympic competition in the year 1964 in Tokyo Olympics.

**3. NATIONAL VOLLEYBALL CHAMPIONSHIP :**

In this tournament all states volleyball team of India take part. The first National Volleyball Championship was held in Chennai in the year 1952.

**4. NATIONAL SCHOOL GAMES VOLLEYBALL CHAMPIONSHIP :**

It is held every year at different venues as a part of National School games.

**5. ALL INDIA INTER-UNIVERSITY CHAMPIONSHIP :**

It is held every year at different venues (Universities). In this championship team of volleyball of all universities of India participate. This tournament is organised by A.I.U. under aegis of ministry of youth affair of India.

**6. COMMONWEALTH VOLLEYBALL CHAMPIONSHIP :**

The first commonwealth Volleyball Championship was held in 1981 in England. India won a bronze medal in this championship in 1981.

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## FAMOUS SPORTS PERSONALITY

### A. INTERNATIONAL

- |                      |                   |                     |
|----------------------|-------------------|---------------------|
| 1. Samantha Carter   | 2. Jess Brackin   | 3. Abbie Toni       |
| 4. Camerongriffin    | 5. Alesha Deesing | 6. Kristin Richards |
| 7. Jessica Swarbrick | 8. Katie Carter   |                     |

### B. NATIONAL

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. K. Udaya Kumar    | 2. Avnish Yadav      | 3. Sukhpal Singh     |
| 4. Kulwant Singh     | 5. Ravi Kant Reddy   | 6. Daler Singh       |
| 7. Jimmy George      | 8. Nripjit Singh     | 9. Shayam Sunder Rao |
| 10. Abdul Bishat     | 11. Sooba Rao        | 12. S.K. Mishra      |
| 13. Km. Saley Joseph | 14. Km. Gayatri Rana | 15. Ranbir Singh     |

#### 1. JIMMY GEORGE :-

He belongs to Kerala and he received Arjuna award in 1976 for his best performance in commonwealth games.

#### 2. NRIPJIT SINGH:-

He belongs to Punjab. He represented Indian volleyball team several times in international and national competition. He received Arjuna award in the year 1962.

#### 3. SHAYAM SUNDER RAO:-

He received Arjuna award in the year 1974. He was the captain of Indian volleyball team in the year 1975-76. After his retirement he provided his services to India team as a coach. He has also received dronacharya award in the year 1991.

#### 4. AVNISH YADAV :-

He belongs to Etawah (U.P.). He completed his professional qualification in physical education from L.N.I.P.E. Gwalior. He was outstanding player of volleyball. He has played for India in the international competition many times.

## SPORTS AWARDS

### 1. ARJUNA AWARDS

- |                    |      |                    |         |
|--------------------|------|--------------------|---------|
| 1. A. Palenismwamy | 1961 | 2. Nripjit singh   | 1962    |
| 3. Malini Reddy    | 1971 | 4. Sham Sunder Rao | 1974    |
| 5. Jimmy George    | 1976 | 6. Kutty Krishnan  | 1978-79 |
| 7. R.K. Purohit    | 1983 | 8. Abdul Bashid    | 1989    |

### 2. DRONACHARYA AWARD

- |                        |      |
|------------------------|------|
| 1. M. Shyam Sunder Rao | 1991 |
|------------------------|------|

### 3. DHYAN CHAND AWARD

- |               |      |
|---------------|------|
| 1. Om Prakash | 2002 |
|---------------|------|
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# BASKETBALL

## HISTORY OF BASKETBALL

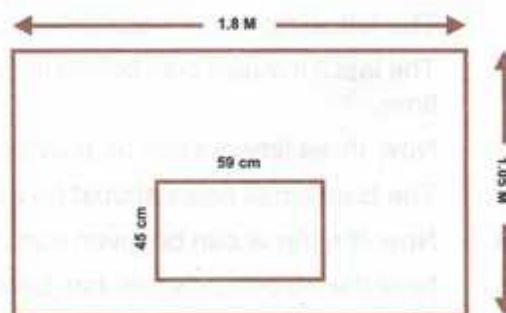
The game basketball was invented by Dr. James Naismith of U.S.A. in the year 1891 at Springfield College. In the beginning 40 to 50 players formed a team, however when the game became popular and somewhat technical, five players were considered enough for a team. Dr. James Naismith himself formed the first set of rules in 1892. These rules were standardized in 1915 only. Graduates of Springfield College Y.M.C.A. men and soldiers of America carried this game to other parts of the world. This game was played as a demonstration game during the Olympic Games at Louis. An International Basketball Federation was set up in 1932. At last, in 1936 Olympic Games, which were held in Berlin, Basketball was included in these Olympics.

In India, Basketball was introduced by Y.M.C.A. College of Physical Education, Chennai about ninety years back. Basketball Federation of India was formed in 1950. This is the controlling body of this game in India.

## BASIC RULES

### 1. COURT :

The basketball court shall be rectangular in shape. As per international standard the court should be 28m in length and 15m in width. There should be a clear space of at least 2m from the boundary lines and the height of the hall should be at least 7m if played indoors.



### 2. BACKBOARD :

The board should be 0.03m thick, 1.80m length horizontally and 1.05m vertically. Its lower edge should be 2.90 m above the floor.

### 3. RING :

Basketball rings should have an inside diameter of 0.45m, thickness of 0.017m to 0.020m, should be painted orange, be horizontal to the floor and 3.05m above it.

### 4. NET :

Nets of 0.40m length should be attached to the rings to check the ball slightly.

### 5. BALL :

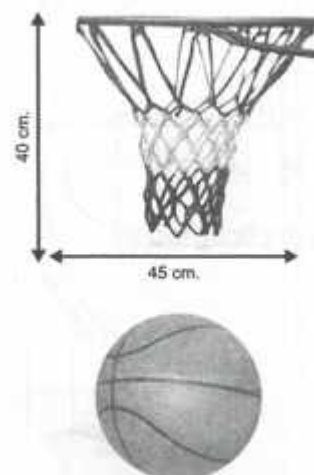
Basketball should have circumference of 0.749 to 0.780m and should weigh between 600gm to 650gm.

### 6. TIME OUT :

One in each quarter and twice in the last quarter for a maximum of one minute.

### 7. 24 SECOND RULE :

When a team gains possession of the ball, they have 24 seconds in which to shoot but if they fail to do so, they lose possession.





**8. 5-SECOND RULE:**

A closely guarded player holding the ball should pass, roll, bounce or shoot the ball within five seconds.

**9. 8-SECOND RULE :**

After receiving the ball in the back court, a team must take it to their front court within eight second, failure to do so is a violation of eight second rule.

**10. BALL RETURNED TO THE BACK COURT :**

A team in control of the ball in their front court should not send it to the back court. Doing so is a violation.

**11. 3-SECOND RULE:**

A player, while the ball is in control of his team, cannot remain for more than three second in the opponent restricted area.

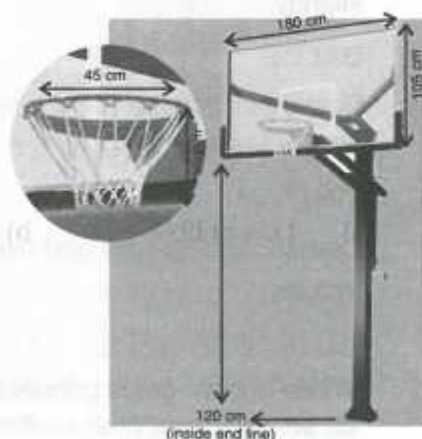
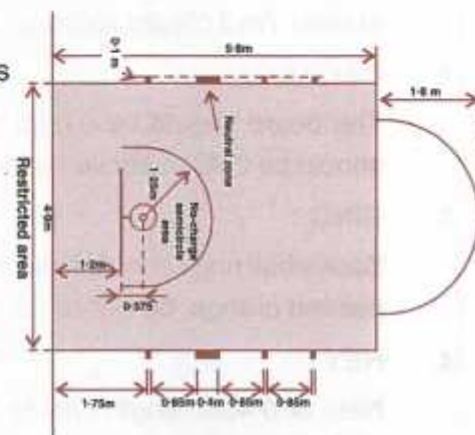
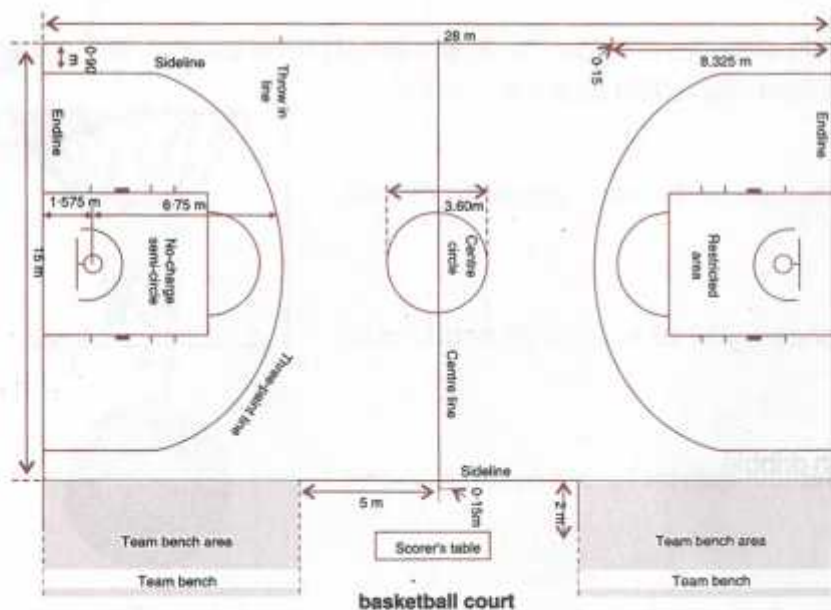
**12. PIVOTING :**

A player holding the ball is allowed to step once or more than once in any direction with the same foot while the other foot, called the pivot foot, is kept in contact with the ground during this action.

**LATEST GENERAL RULES**

The following rules of basketball have been changed. The genral rules have been described?

1. The last 2 minutes play before the end of the game should be played in real sense and not to pass the time.
2. Now, three timeout can be provided during the second half of the game.
3. The Basketball poles should be at least 2m away from the end line.
4. Now, the throw can be given from the end line.
5. Now the 30 seconds rule has been changed to 24 seconds.
6. Now there are four periods of the game i e 10-10-10-10 minutes





## MEASUREMENT OF PLAYFIELD AND SPECIFICATION OF SPORTS EQUIPMENTS

### BASKETBALL COURT

- |   |           |
|---|-----------|
| 1. Dimension                              | 28m x 15m |
| 2. Radius of centre circle                | 1.80m     |
| 3. Free throw line (from end line)        | 5.80m     |
| 4. Three point area (from centre of ring) | 6.25m     |
| 5. Width of marking line                  | 5cm       |

### BACK BOARD

- |  |         |
|--|---------|
| 1. Length (Vertical)                                   | 1.05m   |
| 2. Width (Horizontal)                                  | 1.80m   |
| 3. Thickness   | 3 cm    |
| 4. Width of strip around the board                     | 5 cm    |
| 5. Height of lower edge of backboard<br>from the floor | 2.90 m  |
| 6. Vertical length of inside rectangle                 | 0.045 m |
| 7. Horizontal length of inside rectangle               | 0.59 m  |

### RING

- |                                |        |
|--------------------------------|--------|
| 1. Diameter                    | 45 cm  |
| 2. Length of net               | 40 cm  |
| 3. Distance of ring from board | 15cm   |
| 4. Distance of ring from floor | 3.05 m |

### BALL

- |                  |               |
|------------------|---------------|
| 1. Weight        | 600 to 650 gm |
| 2. Circumference | 75 to 78 cm   |

## FUNDAMENTAL SKILLS

1. Holding the ball
2. Handling the ball
3. Basic stance      a) Defensive      b) Attacking
4. Moving on the court
5. Passing
 

a) Chest pass	b) Bounce pass	c) Hook pass	d) Underhand pass
e) Baseball pass	g) Jump pass	f) Overhead pass	
6. Dribbling
 

a) Low dribble	b) High dribble
----------------	-----------------
7. Offensive strategy
 

a) Triangular attack	b) Screening
----------------------	--------------
8. Pivoting : Pivoting means turning the body to either side by using any one leg as support.

9. Shooting

- |                |                       |
|----------------|-----------------------|
| a) Chest shot  | b) One hand push shot |
| c) Lay up shot | d) Jump shot          |
| e) Hook shot   |                       |

10. Positioning on the court

11. Team defence

- |                       |                                 |
|-----------------------|---------------------------------|
| a) Man to man defence | b) Switching man to man defence |
| c) Zone defence       | d) Guarding                     |

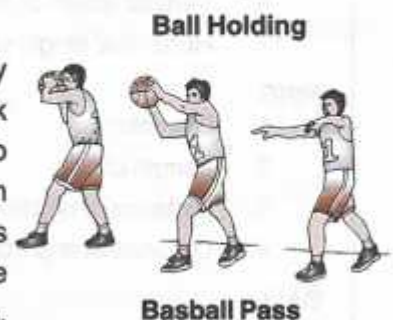
1. **HOLDING THE BALL :**

Holding the ball is very significant for passing, throwing, shooting and dribbling in basketball. So the ball should be held in hand with fingers spread and the thumb tilted inward. The ball should not be held between palms while holding the ball. The hand should be relaxed but the grip should be firm. The ball should be enough close to the body.



2. **BASEBALL PASS :**

Keep two hands on the ball as long as possible, use a stance with body parallel to the sidelines, feet parallel to the baseline and then plant the back foot, point and step with the front and throw the ball from the ear, similar to a baseball catcher throws. Use full pronation and extension of the arm ending with the thumb down as a measure of follow-through, throw this pass only with the dominant arm, using the off-hand to catch the fake pass and stabilize the ball. This pass is effective in throwing long passes.



Ball Holding

Basball Pass

3. **PIVOTING :**

Pivoting means turning the body to either side by using any one leg as a support. In pivoting, one foot must be fixed on the floor and the other foot or leg may be moved in any direction. During this movement the ball should be kept close to the chest. The pivoting is very useful for getting rid of an opponent.

4. **DRIBBLING :**

The palyers with the ball can move freely while bouncing the ball on the floor. The hand doesn't strike the ball, but taps it with flick of the wrist. Stopping and restarting a dribble is against the rule.



DRIBBLING

5. **MOVING ON THE COURT :**

Players are allowed to move anywhere on the court, but are not allowed to run while holding the ball.

6. **MAN TO MAN DEFENCE :**

The most conventional defence used in basketball is the straight man to man defence in which each defence player position himself between the offensive player to whom he is assigned.

It can be played with two variations -

- (a) Pressing man to man
- (b) Loose man to man



## 7. LAY UP SHOT :

It is a shot at the basket by a dribbler by taking off on one foot using a high jump action and a full extension of the arm to place the ball directly or indirectly into the basket.



## TERMINOLOGIES

1. **ASSIT** : A pass or hand off resulting in a basket by a team mate.
2. **BACKBOARD** : The surface of wood, metal or glass to which the basket is affixed, **Lay-up Shot** used to carry shot into the basket.
3. **CHARGING** : A foul by an offensive player who runs into a defensive player who has established legal court position.
4. **DUNK** : To leap to or above the basket and stuff the ball through the hoop. Such a movement with great vigour is called a slam dunk.
5. **FREE THROW** : The unobstructed shot from the foul line, worth one point awarded as a penalty for a foul by the opposing team.
6. **GIVE AND GO** : A play in which one palyer passes to a team mate and drives towards the basket to receive a pass for a lay-up.
7. **HELD BALL** : Simultaneous possession of ball by opposing players, leading to use of the alternate possession rule.
8. **JUMP-BALL** : Means putting the ball upward between two palyers into play by having an official toss it. This only occurs at the start of the game.
9. **LAY-UP** : A shot from alongside the basket, using the backboard as a guide.
10. **TRAP** : Convergence of two or more defenders on a ball handler to force a turnover or steal.
11. **THROW IN** : A method of putting the ball into play from out of bound.

## IMPORTANT TOURNAMENTS

- |  |                                   |
|--|-----------------------------------|
| 1. European Cup  | 2. America Cup                    |
| 3. Asian Cup   |                                   |
| 4. William Todd Memorial Trophy (National Level Competition for men) |                                   |
| 5. Prince Basalat Jha Trophy (National Level Competition for women)  |                                   |
| 6. B C Gupta Trophy  | 7. Federation Cup                 |
| 8. C Munni Swami Cup   | 9. All India Ramu Memorial Trophy |
| 10. S. M. Arjuna Raja Trophy   | 11. Banglore Blues Cup            |
| 12. Williams Jones Cup   |                                   |
- 1) **OLYMPIC GAMES** :

In Olympic Games the basketball game was introduced in 1936. Since then the basketball championship is being held in olympic games.



## 2) ASIAN GAMES :

The Basketball Championship is being held in Asian games since 1951 as a part of these games.

## 3) NATIONAL BASKETBALL CHAMPIONSHIP :

This is a National Championship of basketball for mens and womens. The first national basketball championship was held at Bangalore in 1952. It was organised by Basketball Federation.

## 4) ALL INDIA INTER UNIVERSITY CHAMPIONSHIP :

It is held every year at different Venues (University). In this championship all university teams of basketball take part.

### FAMOUS PERSONALITIES

- |                    |                     |
|--------------------|---------------------|
| 1. Sarbjeet Singh  | 2. Gurdyal Singh    |
| 3. Nishant Kumar   | 4. Surendra Kataria |
| 5. Vijay Raghvan   | 6. Radhey Shyam     |
| 7. Manmohan Singh  | 8. Khushiram        |
| 9. Parmendra Singh | 10. S S Chana       |
| 11. Suman Sharma   |                     |

1. **Sarbjeet Singh** : He was an outstanding basketball player of India. He got Arjun Award in 1968.
2. **Ajmer Singh** : Ajmer Singh played for India in the International competition more than hundred times. He received Arjun Award in 1983.
3. **Suman Sharma** : Suman Sharma was a very famous player of India. She was awarded the Arjun Award in 1983.
4. **Nishant Kumar** : He belongs to Bihar. He represented Indian basketball team several times in International and National Competition.
5. **Khushiram** : He has won the men's National basketball championship several times. He is the most successful and outstanding player of basketball. He represented India several times in tournaments of National and International level. He was given the Arjuna Award in 1967.

### SPORTS AWARD

#### 1. ARJUNA AWARDS

- |          |                            |             |                     |
|----------|----------------------------|-------------|---------------------|
| 1. 1961  | Sarbjeet Singh             | 2. 1967     | Khushi Ram          |
| 3. 1968  | Gurdyal Singh              | 4. 1969     | Hari Dutt           |
| 5. 1970  | Abbas Moontasir            | 6. 1971     | Manmohan Singh      |
| 7. 1973  | Surendra Kumar Kataria     | 8. 1974     | Anil Kumar Punj     |
| 9. 1975  | Hanuman Singh              | 10. 1979-80 | Om Prakash          |
| 11. 1983 | Radhey Shyam, Suman Sharma | 12. 2000    | Sahhab Singh Cheena |

#### 2. DHYAN CHAND AWARD

- |         |           |
|---------|-----------|
| 1. 2000 | Ram Kumar |
|---------|-----------|
-

# FOOTBALL

## HISTORY OF FOOTBALL

Football is the most popular game played throughout the world. The origin of football is not clear. During the ancient times, the Chinese played soccer like game that involved kicking a leather ball with foot. Later Romans introduced football as a part of military training. However it is said that a game similar to football was played in 300 B.C. to 500 B.C. by the Greeks of Sparta and they called this game Harpaston. Japanese also played a similar type of game called Kemari. But some believe that like some other ball games football originated in England or the Romans introduced it in Great Britain which might have developed into football.

So the credit of the beginning of modern football goes to England. Football became very popular in England in 12th Century.

First time Sheffield football club was formed in 1863. After that London football association was formed in London in 1863. The first competition by the Football Association "Challenge Cup" was organised in 1872. The code of rules were framed in 1846 at Cambridge University by Messrs H De Winton and J.C Thring. At that time only 10 rules were introduced. The first rule book of football was published in 1862 and was revised in 1863. With the passage of time, some rules were formed such as the restriction was laid on touching the ball with hands in 1864. The rule related to goal kick and corner kick were framed in 1874. First time, the goal post was made in 1875. The whistle was used first time in the game by the referee in 1878. The net in the goal post was used in 1892. The offside rule was changed in 1925.

This game got the great popularity after the formation of International Football Association in 1904. An demonstration sports in the olympic of 1900 and 1904. Football became an official olympic event in 1908. England got the membership of FIFA in 1906.

The first world cup of football organised on July 18, 1930, at Montevideo. Women played first world cup football held in 1991 in which America was declared the winner.

In India football is controlled by Indian Football Association. India participated first time in olympic games in 1948.

## BASIC RULES

### 1. THE FIELD OF PLAY :

The soccer field must be rectangular. Length of playing field : 110 yard to 120 yard

Width of playing field : 70 yard to 80 yard

Distinctive lines not more than 5 inches (12cm) wide marks the playing area.

### 2. THE BALL :

The ball made of leather or approved material, the soccer ball must be spherical in shape.

Circumference of ball : 68 to 70 cm

Weight of ball : 410 to 450 gm

Air pressure : 1kg/cm<sup>2</sup>



The Ball



### 3. THE NUMBER OF PLAYERS :

Each team consists of maximum 11 players inclusive of a goalkeeper. A minimum of 7 players (including goalkeeper) are needed to start a match.

There may be five to seven substitutes but in official competition only three substitutes are permitted.

### 4. THE PLAYERS EQUIPMENT :

The compulsory dress of a player is a jersey or shirt (with number on back), shorts, stocking, shin guard, shoes with studs. The goalkeeper shall wear a shirt and short with padding at the elbow. And the colour of the dress of a goalkeeper should be different that distinguish him from the other players.

### 5. GAME OFFICIALS :

Referee-one, asst referee-two, scorer-one, time keeper-one.

The officials are required to officiate in a game. Their decision regarding the enforcement of rules is final.

### 6. DURATION OF THE GAME :

A match consists of two halves of 45 minutes each (rest not more than 15 minutes. between two halves). Time lost in substitution and injury etc. should not be counted as a part of playing time.

In case of tie, two halves of 15 min each with an interval of 5 min are provided.

### 7. THE GOAL POST :

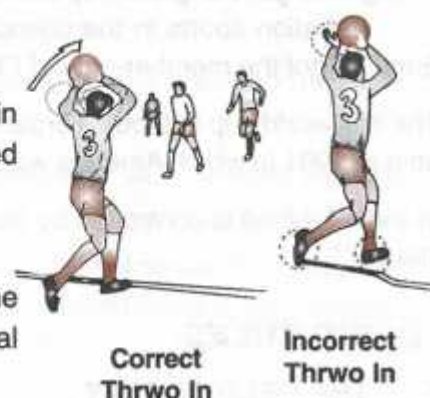
Length of the goalpost	:	8 yard
Height of the goal post	:	8 feet (2.44 m) from the lower edge of ground
Diameter of goal post	:	5 inches

### 8. THROW IN :

When the ball goes out of the side line it is returned to play by a throw in from the spot where it left the playing field. The players who last touched the ball, his opponent is given a throw in.

### 9. OFF SIDE :

A player is off side when he is closer to the opposing goal line with the ball and unless two defenders are between the attacker and the goal line. Goal is not considered in that case.



### 10. CORNER KICK :

When a defender puts the ball out of the play behind his team goal line. It is returned into play by awarding a corner kick to the attacking team.

### 11. PENALTY KICK :

It is direct free kick and is scored from 12 yards away to goal line. During this kick all the players should be outside the penalty area. A penalty kick is awarded when a foul is committed by a defender in the penalty area and the attacking player tries to kick it directly into the goal. Only goal keeper defends it.

### 12. GOAL KICK :

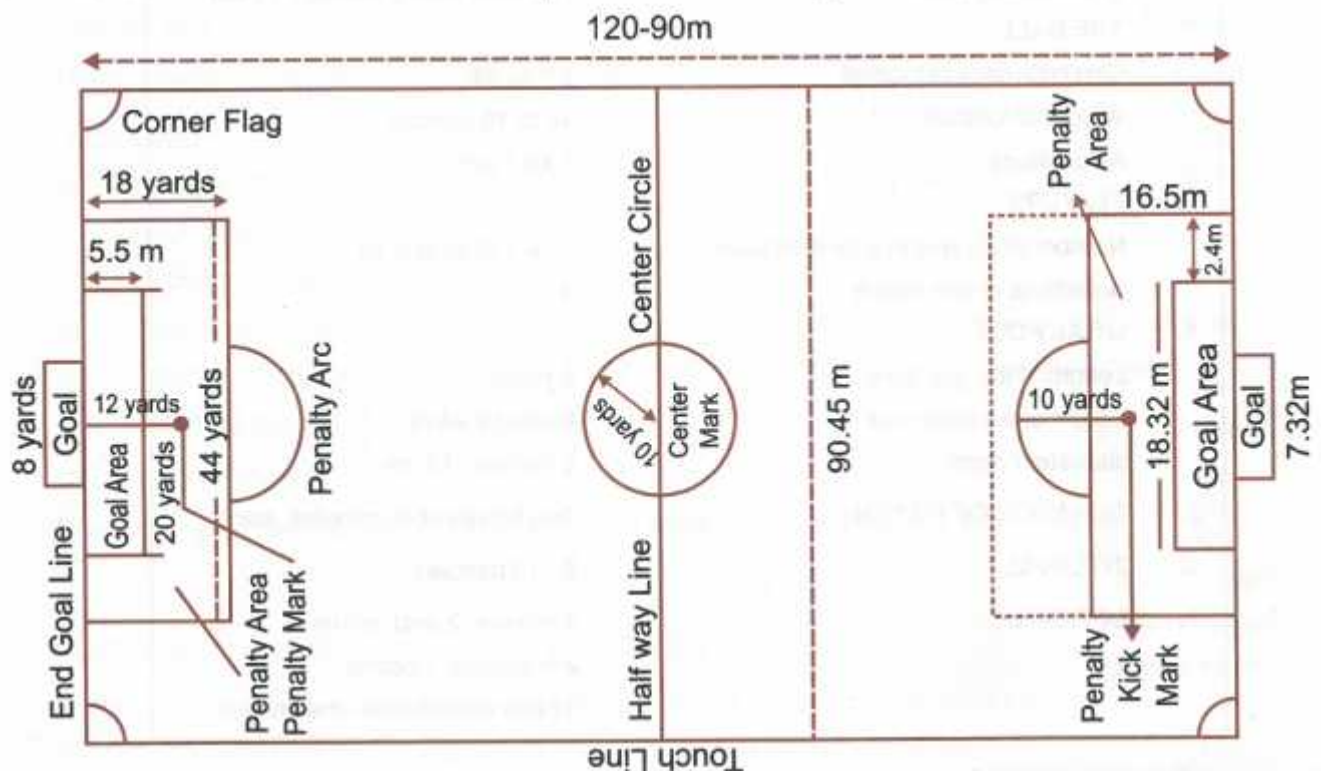
A goal kick is awarded to the defending team when the ball being last touched by a player of the attacking team, passes over the goal line.



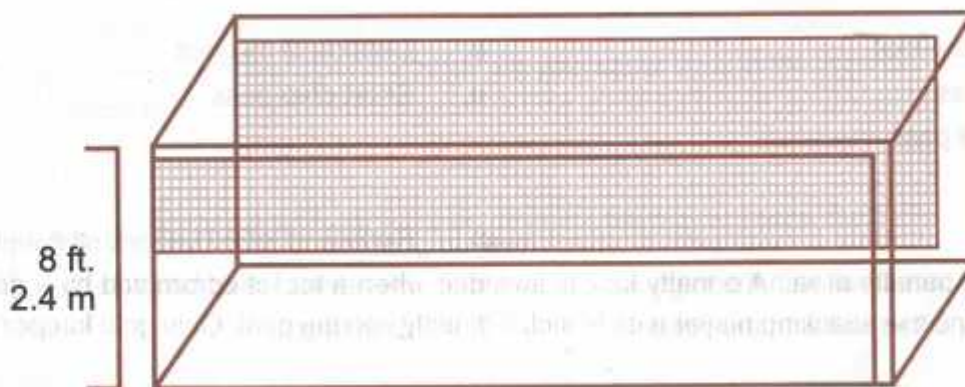
## LATEST GENERAL RULES

The following rules have been changed in football game.

1. Now 3 players can be substituted from extra players.
2. Now the goalkeeper can run while holding the ball without bouncing it. But he has to do it without any delay.
3. Now there are 18 players instead of 16 players and out of these, seven players are called substitute players.
4. The goal keeper can move on the goal line at the time of penalty kick.
5. The rule of sudden death has been implemented in football game.



FOOTBALL FIELD



GOAL POST

## MEASUREMENT OF PLAYFIELD AND SPECIFICATION OF SPORTS EQUIPMENTS

<b>1. PLAYING FIELD (Rectangular)</b>	
Length	: 100 - 130 yds / 90-120 m
Width	: 50 - 100 yds / 45-90 m
For International matches	
Length	: 110 - 120 yds / 100 - 110 m
Width	: 70 - 80 yds / 64-75 m
Line marking width	: not more than 5 inches / 12 cm
<b>2. THE BALL</b>	
Circumference of football	: 27" to 28"
Weight of football	: 14 to 16 ounces
Air pressure	: 1 kg / cm <sup>2</sup>
<b>3. PLAYERS</b>	
Number of players in a football team	: 11 + 7 (Extra) = 18
Substitute in one match	: 3
<b>4. GOAL POST</b>	
Length of the goal post	: 8 yards
Height of the goal post	: 8 feet / 2.44 m
diameter / depth	: 5 Inches / 12 cm
<b>5. DURATION OF MATCH</b>	: Two halves of 45 minutes. each
<b>6. INTERVAL</b>	: 5 - 10 minutes
<b>7. OFFICIAL</b>	
	1 referee, 2 asst. referee
	2 linesman, 1 scorer
	1 table official, one time keeper

## FUNDAMENTAL SKILL

### 1. PASSING :

- |                       |                        |
|-----------------------|------------------------|
| a. Inside of the foot | b. Outside of the foot |
| c. Instep pass        | d. Short chip pass     |
| e. Long chip pass     |                        |

### 2. RECEIVING

- |   |  |
|---|--|
| a. Sole trap                            | b. Receiving lofted ball with the instep |
| c. Receiving lofted ball with the thigh | d. Receiving lofted ball with the chest  |
| e. Receiving lofted ball with the head  | f. Shin trap                             |

### 3. KICKING

- |                                     |  |
|-------------------------------------|--|
| a. Instep kick                      | b. Kicking with the inside of the foot |
| c. Kicking with outside of the foot | d. Push kick                           |

- e. The flick kick
- g. Scissors Kick

- f. The jab

#### 4. SHOOTING

- a. Instep drive shot
- b. Full volley shot
- c. Half volley shot
- d. Side volley shot
- e. Swerving shot

#### 5. HEADING SKILL

- a. Dive head
- b. Jump head

#### 6. DRIBBLING

#### 7. SHIELDING

#### 8. TACKLING

- a. Poke tackle
- b. Slide tackle
- c. Block tackle

#### 9. GOAL KEEPING SKILL

- a. Goal keeper stance
- b. Catching ground ball half kneeling
- c. Catching high ball
- d. Punching and fisting high ball
- e. Catching ground ball while standing

#### 1. SHORT CHIP PASS :

Short chip pass are usually given to the team mate who is very close.



**SHORT CHIP PASS**

#### 2. RECEIVING LOFTED BALL WITH THE CHEST :

A high dropping ball is received on the chest. For that, place yourself between the defender and the oncoming ball. Bent your knees a little bit, keep arms out to sides for balance, steady your head and watch the ball. Arch your upper body slightly backward from the vertical and receive the ball on the central area of your chest and withdraw chest to cushion the impact. Attempt to control the ball into space away from the opponent by turning your upper body in the direction of next movement.



**RECEIVE BALL WITH THE CHEST**

#### 3. DRIBBLING :

A succession of forward pushes or touches in which the player keeps the ball under control.

#### 4. TACKLING :

It is a technique used to dispossess the opponents of the ball in order to gain possession of it. Tackling means tackling the ball, not the opponent. Tackling is strictly a defensive skill used to steal or strip the ball from an opponent.



**TACKLE**



5. **SHEILDING :**

When the dribbler stays between the ball and the marking opponent. It is also referred to as "screening". Sheilding is often used in conjunction with dribbling to protect the ball from the opponent trying to gain possession.



**SHEILDING**

6. **THE FLICK KICK :**

It is another short distance kick, which requires the player to possess firm ankle. The outside of the right foot is used to flick the ball towards right and the pass can be clearly concealed until the last possible movement by swerving slightly in the opposite direction.

**TERMINOLOGIES**

1. **GOLDEN GOAL :**

In extra time any team who scores first is declared winner. This goal is called golden goal.

2. **SUDDEN DEATH :**

When no goal is scored after tie breaker, the teams are given one penalty kick to each team till the tie is broken. This is known as sudden death.

3. **TIE BREAK :**

When no team is able to score goal up to extra time, five penalty kicks are given to each team. It is called tie break.

4. **LOB :**

To kick the ball high, usually into the goal mouth.

5. **HAND BALL :**

When a player carries or strikes the ball with the hand or arm it is called hand ball.

6. **OFF SIDE :**

An offensive player is off side when he is not nearer to his opponent's goal line than atleast two of his opponents.

7. **DIRECT FREE KICK :**

It is a kick from which a goal can be scored direct against the offending side.

8. **BANANA SHOT :**

A shot or pass that curves.

9. **SHIELDING :**

When the dribbler stays between the ball and the marking opponent.

10. **THROW IN :**

The act of throwing the ball into play with both hands and from above the head after it has crossed one of the touch lines.

11. **MAN ON :**

Popular term used to signal a team mate that defensive pressure is approaching suggesting an immediate touch or pass to a teammate.

12. **VOLLEY :**

Meeting the ball in the air with some part of the body and directing it to a team mate or on goal.

## IMPORTANT TOURNAMENTS

### 1. INTERNATIONAL

- |                                 |                                  |
|---------------------------------|----------------------------------|
| a. Olympic games                | b. World Cup Football (FIFA Cup) |
| c. European League Championship | d. Asian games                   |
| e. America Cup                  | f. Colombo Cup                   |
| g. UEFA Cup                     | h. Africa Cup                    |
| i. Pacific Cup                  | j. Kopa Cup                      |

### 2. NATIONAL

- |                           |                               |
|---------------------------|-------------------------------|
| a. Durand Cup             | b. Rovers Cup                 |
| c. I.F.A. Shield          | d. D.C.M. Trophy              |
| e. Nehru Gold Cup         | f. Nizam Gold Cup             |
| g. Nagjee trophy          | h. G.U. Raja Memorial Trophy  |
| i. B.C. Roy Trophy        | j. Santosh Trophy             |
| k. Subroto Cup            | l. Gold Cup                   |
| m. Begum Hajrat Mahal Cup | n. Air Lines Gold Cup         |
| o. Rajiv Gandhi Gold Cup  | p. Lal Bahadur Shastri Trophy |
| q. Sanjay Gold Cup        |                               |

## VENUES

- |                                     |                               |
|-------------------------------------|-------------------------------|
| 1. Brookland, England               | 2. Bamvale Stadium, London    |
| 3. Jawahar Lal Nehru Stadium, Delhi | 4. Salt Lake Stadium, Kolkata |
| 5. Block Heath, London              |                               |

### 1. FIFA CUP :

This cup is organised by Federation of International De Football Association. It was established on May 21, 1904.

### 2. OLYMPIC GAMES :

Football was included in olympic games in 1908 at White city, London.

Since then, football competition is a part of olympic games.

### 3. ASIAN GAMES :

Football competition as part of asian games. First competition was held at Delhi in March 1951.

### 4. DURAND CUP :

It is an oldest tournaments of football in India. This cup was started in 1888 at Shimla and is now held in Delhi.

### 5. D.C.M. TROPHY :

The tournament was started in 1945 for the D.C.M. trophy.

### 6. I.F.A. SHEILD :

It was started in 1893 and it is held at Kolkata.

### 7. SUBROTO CUP :

It is an inter-school tournament of football.

---

## FAMOUS SPORTS PERSONALITIES

### (a) INDIAN

- |                         |                  |                     |
|-------------------------|------------------|---------------------|
| 1. P. K. Banerjee       | 2. T. Balram     | 3. Jarnail Singh    |
| 4. Arun Lal Ghosh       | 5. Inder Singh   | 6. Sudhir Karmakar  |
| 7. Subroto Bhattacharya | 8. I. N. Vijayan | 9. Baichung Bhuttia |
| 10. Peter Thangaraj     | 11. Shanti Malik | 12. Gurdev Singh    |

### (b) INTERNATIONAL

- |                |                  |              |
|----------------|------------------|--------------|
| 1. Pele        | 2. Maradona      | 3. Ronaldo   |
| 4. Zidane      | 5. David Beckham | 6. Ronaldino |
| 7. Rudy Baller | 8. Kaka          | 9. Romario   |
| 10. D. Sooker  | 11. Rivaldo      | 12. Shilachi |

#### 1. P.K. Banerjee :

He Captained Indian Football team in Rome olympic in 1960. He represented India till 1964. He was awarded Arjuna Award in 1961.

#### 2. Chunni Goswami :

He started his career by playing for Mohan Bagan Club of Kolkata. In his Captaincy India won Asian Games Competition in 1962. Which were held at Djakarta. He was awarded Arjuna Award in 1963.

#### 3. Jarnail Singh :

He was an outstanding defender. He was awarded Arjuna Award in 1964.

#### 4. Pele :

Pele name is at the top of football player of the world. His nick name is Black Pearl. He scored 1281 goals in 1363 matches. He has been the sports minister of Brazil.

#### 5. Maradona :

In 1986 world cup, he was declared the best players of the tournament. Maradona, the world famous player was born on 30 oct. 1960.

#### 6. Ronaldo :

He belongs to Brazil. He is considered the best dribbler. He was awarded golden ball award in 1997.

## SPORTS AWARDS

### A. ARJUNA AWARD

- |                           |                       |                      |
|---------------------------|-----------------------|----------------------|
| 1961 P.K. Banerjee        | 1962 T. Balram        | 1963 Chunni Goshwami |
| 1965 Arun Lal Ghosh       | 1967 Peter            | 1969 Inder Singh     |
| 1973 Madan Singh Rajiv    | 1980 Mohd. Habid      | 1983 Shanti Malik    |
| 1989 Subroto Bhattacharya | 1998 Baichung Bhuttia | 2002 I. N. Vijayan   |

### B. DRONACHARYA AWARD

- 1990 Syed Naeemuddin

### C. PADMA SHRI AWARD

- |                     |                     |
|---------------------|---------------------|
| 1962 Goshta Behari  | 1971 S.N. Manna     |
| 1984 Chunni Goswami | 1990 P. K. Banerjee |
-



# HANDBALL

## HISTORY

The game of handball was originated by a famous gymnast, Konar Koch of Germany in 19th Century. This game become popular slowly. Frederik Knudsen (Denmark) modified this game in 1911. Its main drawback was that handball used to be considered a game of athletics. The Danish Version had 7 player teams whereas German version teams were composed of 11 players. A show match of handball was held in 1936 Olympics at Berlin. In 1928 Olympics at Amsterdam, teams of different countries participated in the competition. The International Amateur Handball Federation was formed in 1928 during Amsterdam Olympics. The first world championships for 11 and 7 player teams were organised in 1938, in which Germany won both the titles. The 11-player version gradually disappeared and the 7-player version become more popular. Handball game is governed by International Handball Federation (IHF). It become an Olympic event for men in 1972 at Munich and for women in 1976 at Montreal Olympics. In India, it had a slow progress. In India it was started in the year 1970. Handball Federation of India was formed in 1955. Its regulates its organisation, selection of players and training of players.



## BASIC RULES

### 1. THE COURT

The handball court should be rectangular with dimensions of 40 m in length and 20 m in width. The line marking the boundaries on the side of the field are called side lines. The short boundary lines are called goal lines (8 cm wide) for the portion between the goal post and outer goal lines, on either side of the goal.

### 2. THE BALL

The ball is made of leather or synthetic material and must be spherical with no shiny or slippery surface. It should have following dimensions :

- |       |   |                                 |
|-------|---|---------------------------------|
| Men   | - | 58 to 60 cm in circumference    |
|       |   | weight 425 to 475 gram (size 3) |
| Women | - | 54 to 56 cm in circumference    |
|       |   | weight 325 to 375 gram (size 2) |



### 3. PLAYERS

A team consists of 12 players, out of which 7 players ( 6 court players and 1 goalkeeper) are playing and remaining 5 players are substitutes.

### 4. DURATION OF THE GAME

The game shall consist of two 30 minutes halves with a 10 minutes intermission. If the game is tied at the end of regulation time, it may be played over time after a 5 minutes interval. The extra time play consists of 2 halves of 5 minutes each with no break between them.

## 5. PLAYING THE BALL

A player may throw, catch, stop, push or hit the ball, using their open or closed hand arm, head, torso, thighs and knees. A player may -

- i. Hold a ball for a maximum of 3 seconds.
- ii. Take a maximum of 3 steps with the ball.
- iii. Bounce the ball once and catch it while standing or running and dribble the ball and then catch it or roll it on the court and then pick up.
- iv. If the ball by a defensive player except the goalkeeper travels across the goal line outside the goal, a corner throw is awarded to opposition.

### Goals

The goals are 2 meters high and 3 meters wide (internal dimensions), of wood or synthetic material, painted on all sides in two colours (usually red and white stripes) with a securely attached net. Goal posts and cross bars measure 8 cm x 8 cm in cross section.

### Substitution

Players may enter as substitutes at any time and as often as required. A substitution may not be made until the player leaving play has left the court. Players must enter and leave the playing area in their own half of the court and within 3 m of the half way line.

### Scoring

A goal is scored when the referees decide that the whole of the ball has crossed the goal line under the bar and between the two posts, provided the attacking team has not committed an offence. The game is restarted by a throw-off from the centre line, taken by the team who has just conceded the goal. Throw-offs following a goal being scored differ from a throw-off at the start of the game in that the opposition players are not required to be in their own half of the court.

### Starting the game

At the start of a game the captain winning the toss has the choice of ends or throw-off. The throw-off must be taken at the centre line. All players must be in their half of the court. The nearest opponent must be at least 3 meters away from the ball.

## 6. The Throw in

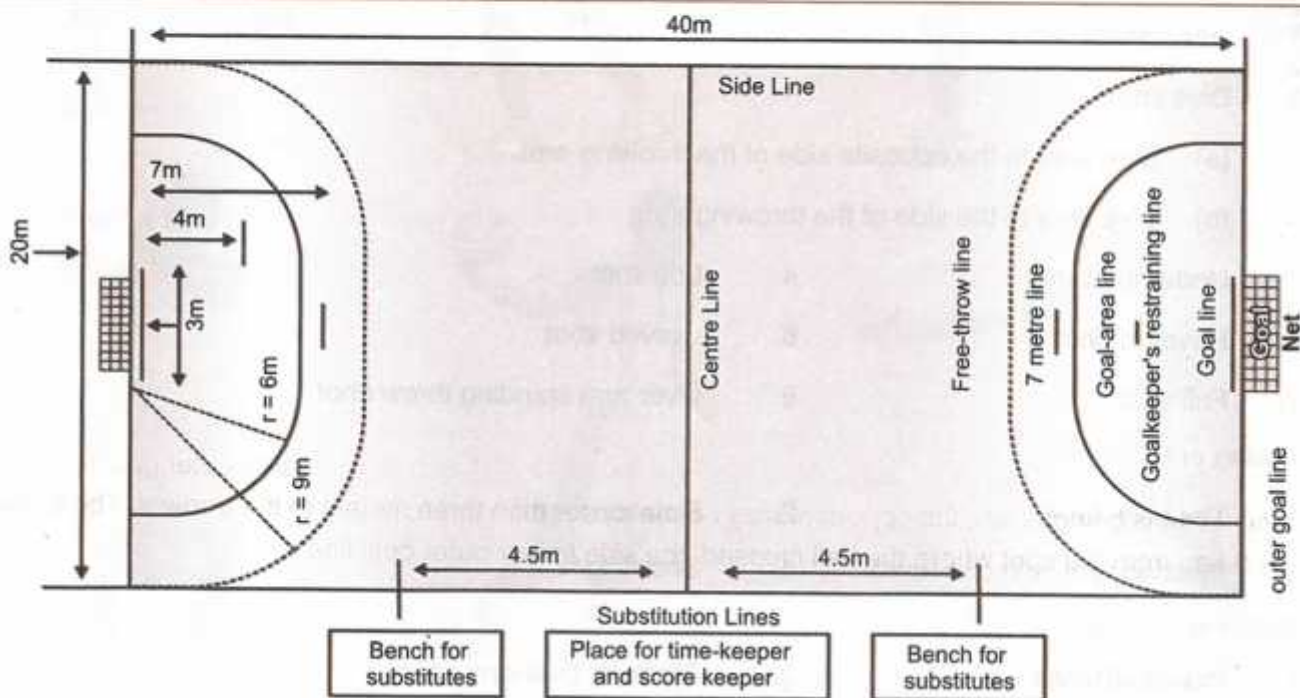
A throw in is awarded when the ball has crossed the entire width of the side line or when a court player of the defending team was the last one to touch the ball before it crossed his teams outer goal line. While the throw is being taken, the opponent may not be closer than three meters to the thrower. The throw-in is taken from the spot where the ball crossed the side line or outer goal line.

---



## MEASUREMENTS OF PLAYFIELD AND SPECIFICATIONS OF SPORTS EQUIPMENT

- |  |  |
|--|--|
| 1. Playing court   | = 40m x 20 m   |
| 2. Height of the goals   | = 2 m  |
| 3. Width of the goals  | = 3 m  |
| 4. Width of the goal lines between goal posts  | = 8 cm   |
| 5. The 7 metre line  | = 1m long line parallel to goal line.                  |
| 6. Total number of players   | = 14 (6 court players, 1 goalkeeper and 7 substitutes) |
| 7. Weight of the ball (male over 16 years and men)   | = 425 gms to 475 gms                                   |
| 8. Circumference of the ball (male over 16 years and men)  | = 58 cm to 60 cm                                       |
| 9. Weight of the ball (women; female youth over 14 years and male youth 12 to 16 years)          | = 325 gms to 375 gms                                   |
| 10. Circumference of the ball (women ; female youth over 14 years and male youth 12 to 16 years) | = 54 cm to 56 cm                                       |
| 11. Weight of the ball (female youth 8-14 years and male youth 8 to 12 years)                    | = 290 gms to 330 gms                                   |
| 12. Circumference of the ball (female youth 8-14 years and male youth 8 to 12 years)             | = 50 cm to 52 cm                                       |
| 13. Playing time or duration (Male & Female)   | = 30 min. - (10 min. rest) - 30 min.                   |



**DIAGRAM OF COURT**



## **FUNDAMENTAL SKILLS**

### **The Stance and Ball Hold -**

#### **1. The Attacker's Basic Position**

#### **2. Holding the ball**

- i. Holding the ball with one hand
- ii. Holding the ball with two hand

#### **3. Grip**

- i. Continental serve
- ii. Western forehand
- iii. Eastern backhand

#### **Catching Skill:**

- 1. Catching the ball at chest level
- 2. Catching a high ball
- 3. Catching a ball on the side
- 4. Catching a low ball

#### **Passes:**

- 1. Bounce pass
- 2. Hook pass
- 3. Chest pass
- 4. Jump pass
- 5. Side arm pass
- 6. Shoulder pass
- 7. Over head pass
- 8. Under hand pass
- 9. Wrist pass
- 10. Reverse pass (behind the back)

#### **Dribble:**

- 1. Low Dribble
- 2. High Dribble

#### **Shots:**

- 1. Jump shot
- 2. Dive shot
  - (a) Dive shot to the opposite side of the throwing arm.
  - (b) Dive shot to the side of the throwing arm.
- 3. Underhand shot
- 4. Lob shot
- 5. Reverse shot
- 6. Curved shot
- 7. Full shot
- 8. Over arm standing throw shot

#### **Faking or Feinting:**

- 1. The body fake
- 2. Rotation fake
- 3. Passing fake with one hand
- 4. Shooting fake

#### **Blocking :**

- 1. Individual block
- 2. Blocking over-arm shot
- 3. Blocking under-arm shot



Different skills performed by the player

## Terminology

- |                   |                              |
|-------------------|------------------------------|
| 1. Blocking       | 2. Bouncing                  |
| 3. Ceiling shot   | 4. Fast break                |
| 5. Fault          | 6. Fly shot                  |
| 7. Jump pass      | 8. Shooting fake             |
| 9. Court player   | 10. Outer goal line          |
| 11. 7 m line      | 12. Scored goal              |
| 13. Referee throw | 14. Reach around             |
| 15. Over time     | 16. Approach to the opponent |
| 18. Body fake     |                              |

## A brief explanation of some of the terms

1. CEILING SHOT : A ceiling shot is one that hit directly to the ceiling.
2. FLY SHOT : A fly shot is one that is played before the ball bounce.
3. FAST BREAK : The fastest way to counter attack against the opponent player.
4. BOUNCING : When a player has to run with the ball, he bounces the ball on the floor.
5. FAULT : A fault is illegally served ball.

## IMPORTANT TOURNAMENTS

### (A) National

- |  |   |
|--|---|
| 1. National Championship                             | 2. Inter University Handball Championship |
| 3. School National                                   | 4. National Games                         |
| 5. Inter-State Handball Championship (Men and women) |   |
| 6. Inter-District Tournament                         | 7. Federation Cup                         |

### (B) International

- |                       |                  |
|-----------------------|------------------|
| 1. SAF Games          | 2. Olympic Games |
| 3. Asian Championship | 4. World Cup     |

## FAMOUS SPORTS PERSONALITIES

- |                  |                    |
|------------------|--------------------|
| 1. Manjeet Singh | 2. Roshan Lal      |
| 3. Surjeet Singh | 4. Malkit Singh    |
| 5. R. Lubhaya    | 6. Sandeep Cautlya |

## AWARDS

### A. Arjuna Awardee

- |                  |      |
|------------------|------|
| 1. Surjeet Singh | 1990 |
| 2. Malkit Singh  | 1994 |
| 3. R. Lubhaya    | 1977 |

### B. Bhim Awardee

- |                 |      |
|-----------------|------|
| Sandeep Cautlya | 1996 |
|-----------------|------|



# HOCKEY

## HISTORY

There are many opinions about the origin of hockey. The beginning of hockey has some link with Egypt because its description is available in a picture in a mosque of Beni Hasan. The Roman carried this game to England but modern hockey was originated in England.

The first hockey club was formed in Black Heath in 1861. The rules for modern hockey were first codified in England and Scotland. In the year 1886, Hockey Association of England was formed in London. International Hockey Federation (IHF) was formed in 1924 with headquarter at Vienna (Austria). Now it has shifted to Paris. Since 1928, hockey is being played in Olympic games regularly.

The game was standardised by the Wimbledon Hockey Club in 1883. Its regulations were adopted in 1886 by the Hockey Association. The first international match was held in 1895 between England and Ireland. In 1908 hockey was included in the London Olympic games for men and in 1980 Moscow Olympics for women.

World Cup for hockey was started in 1971 for men and 1974 for women.

Hockey is a national game of India. In India, first nationals were held in 1928 and India played in Olympic of the first time in 1928 at Amsterdam. India won the Olympic hockey title from 1928 to 1956 in a row. Hockey was included in Asian Games in 1958.

## Basic Rules

### 1) Off side

According to new rules, an attacker in line with the second defender, will not be in off position and the player would be judged on where he is when the ball is passed to him or played with emphasis given on the advantage gained.

### 2) Corner

The restriction of the 25 yards area for awarding a corner if a defender unintentionally diverts the ball over the back line has been removed. In effect, a corner can be awarded if ball is deflected over the back line from any part of the field.

### 3) Penalty Corner

The board has recommended the complex penalty corner clause which forbids the goalkeeper from going to the ground before the first hit to the goal is taken. The rule has evoked considerable confusion and needless controversy since it is difficult for an overburdened umpire to decide whether the goal keeper fell to the ground before or after the first hit was taken.

### 4) Free hit

The board replaced the words 'on the spot' with 'close to' as regards to the free hit. Another change which required the ball to be freed 'at least one yard' when a free hit is taken, considerably curtails the use of the scoop in such a situation. It afterwards led to stoppages when a rushing defender found himself within five yards from the player who essayed the scoop.



5) Substitution

The Hockey Rules Board also confirmed the 'roll in' substitution, but allowed the clock to be stopped while replacing the goalkeeper. The new rule is silent on the precise spot where the substituted goalkeeper can enter in the playing field. It is presumed that the substitution would be done at centre line.

6) Bleeding Injuries

Showing due concern to the alarming spread of AIDS or any other diseases, a player who is bleeding from an injury should be taken outside the field of play and will be allowed back into play only after the bleeding has totally stopped.

7) Field of Play :

The field of play is rectangular.

Length : 100 yard or 91.40 m (side line)

Breadth : 60 yard or 55.00 m (back line)

All lines are 75 mm wide. They are part of the field and marked through out their length.

8) Team :

Hockey is played between two teams of not more than 16 players each, out of which only eleven play the game.

9) The Ball :

The ball shall be spherical

Weight : Minimum 5½ ounces or 156 gm. maximum 5¾ ounces or 169 gm.

Circumference : 224 mm to 235 mm.

10) The Stick :

Flat face on the left hand only, straight except the hooked part and the length 36" to 38". The weight of a stick should not exceed 28 ounces and should not be less than 12 ounces. Length of hockey stick should be 86.94 cm and the wooden head must be not more than 4" in length. The stick should pass through a ring having an interior diameter of 51 mm.

11) Goal Post :

It is made of wood/iron pole. This goal cage is placed on the goal line. It is 7 feet in height and 12 feet wide.

12) Duration of Game :

A match consists of two halves of thirty five minutes each. There should be an interval of five minutes between halves.

### **LATEST GENERAL RULES**

1. According to the new rule rolling substitution has been implemented. It means that any number of player can be substituted at any time except at the time of tie breaker.
  2. The goalkeeper cannot be changed at the time of penalty corner or penalty stroke. He/she can be changed if he/she is injured.
  3. 21 yard dotted circle outside the 16 yard circle has been introduced. This circle is called shooting circle.
-



## MEASUREMENTS OF PLAYFIELD AND SPECIFICATIONS OF SPORTS EQUIPMENT

### PLAYING FIELD (RECTANGULAR)

Length (Side line)	: 100 yards/91.4 m
Width (Back line or goal line)	: 60 yards/54.9 m
Centre line (Line between each half)	: 60 yards
25 yards line from the end line	: 25 yards/22.9m
A line parallel to side line on each 25 yards and centre line ( to control hit-in )	: 2 yards
Distance from the side line (outer edge)	: 5 yards/4.6 m
Width of all lines white in colour	: 3 inches/75mm
Penalty corner hits (from outer edge to nearest goal post)	: 5 & 10 yards
Penalty spot (from inner edge of goal line)	: 7 yards / 6.39 m
Diameter of spot	: 6 inches
Length of marks made for penalty corner hits (inside the play field)	: 12 inches
Shooting Circle (D-shape)	
Length of line in front of each goal parallel to goal line	: 4 yards/3.658 m
Distance from goal (measured from inner edge goal line)	: 16 yards/14.63 m
Radius of shooting circle-D shaped (from inside front corner of goal posts to outer edges of 4 yds. line)	: 16 yards/14.63 m.

### GOAL AND GOAL POST

Width	: 4 yards (3.658 m)
Height	: 7 ft./ 2.13 m
Breadth	: 2 inches/5cm
Depth	: 3 inches
Back board length (behind the goal)	: 4 yards
Side board length (behind the goal)	: 4-6 feet/1.2-1.8 m
Height of boards	: 18 inches
(The support, the boards, chocks inside the goal are not allowed).	

### Net / Wire Screen

Net (mesh) behind the goal posts/cross/bar / back board / side boards.	: 1.0-1.5 inches
--	------------------

### FLAG POST

Height	: 4-5 feet/1.2-1.5 m
Size of flag	: 12x12 inches

( Note : Flags to be provided on each corner on both the ends of middle line and 25-yds. line )

### STICK

(Wooden, straight handle, curved head, smooth flat face, left hand side at lower part and all edges round).

Length (men)	: 38 inches/0.97 m
Senior boys/women	: 35 inches/0.9 m
juniors boys/girls	: 30-40 inches/0.77-.087 m
Weight (men)	: 28 oz/784 gms
Women/juniors	: 23oz\644 gms
Minimum	: 12 oz /336 gms
Length of curved head	: 4 inches (max.)
Stick should pass through a ring of diameter	: 5.10 cm/ 2 inches

### BALL

(smooth and seamless-solid plaster/hard polyurethane composition)

Colour	: White or as agreed
Weight	: 157-164 gms / 5½-5.3 / 4 oz (but not more than)



Circumference (8.13 / 16-9¼ inches)

: 22-23.1 cm

Team, Players and Duration of Game

Number of teams

: 2

Number of players

:  $11 + 5^* = 16$

11 in play including goal keeper and 5 extras

Duration

: Two 35 minutes halves

Equipments required

Goal posts, Net, Flag posts, Stick and Ball

Clothing

**Players :** Shirt, Short, Socks, Shin guard, Multi studded moulded rubber shoes (according to playing area)

**Goalkeeper's :** Dress different from players-Full sleeves shirt, knicker, gauntlet glove, head gear, elbow pad, chest guard, abdomen guard, pads, helmets, throat protectors, upper body protectors.

**Officials** Umpires / Referee / 2, Timekeeper / 1, Captain /1

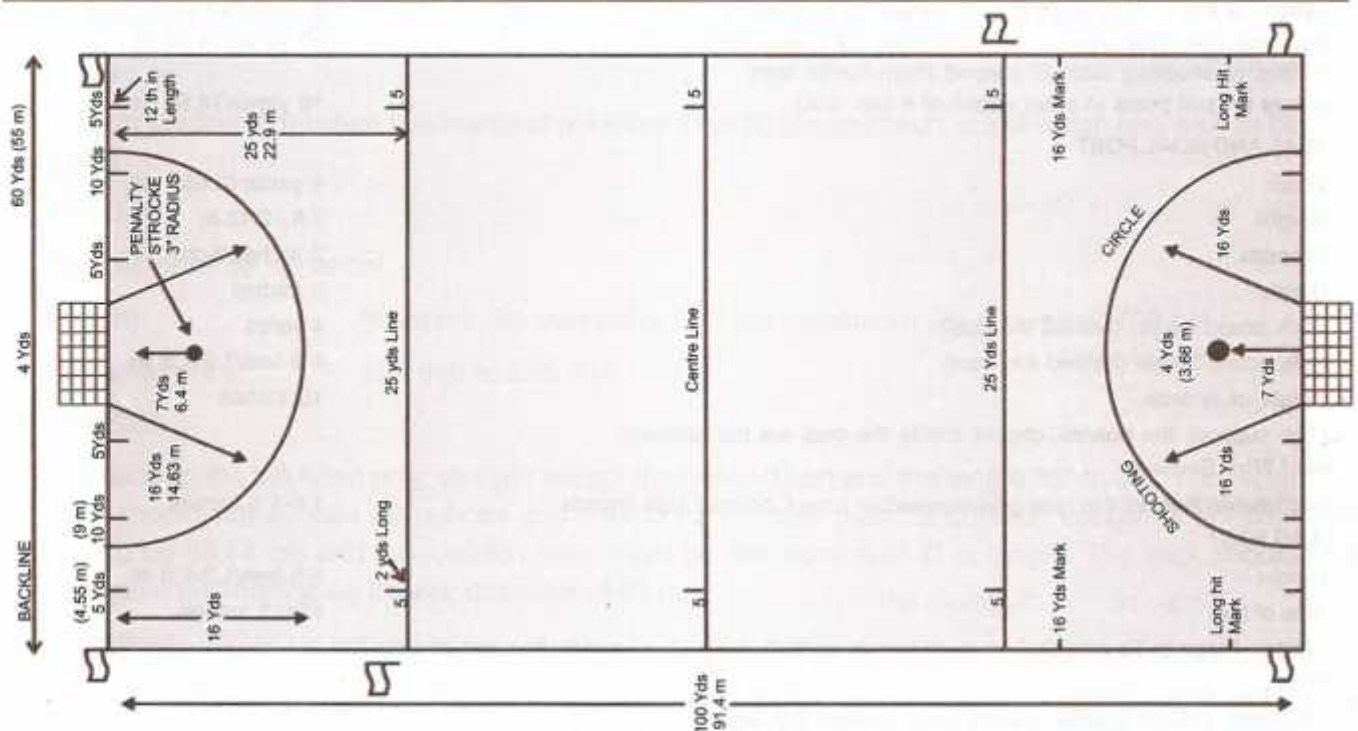
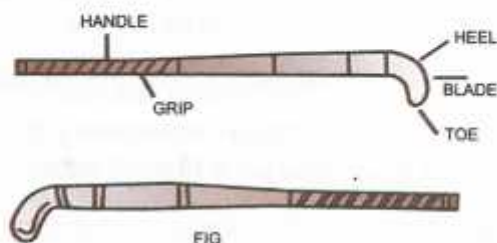
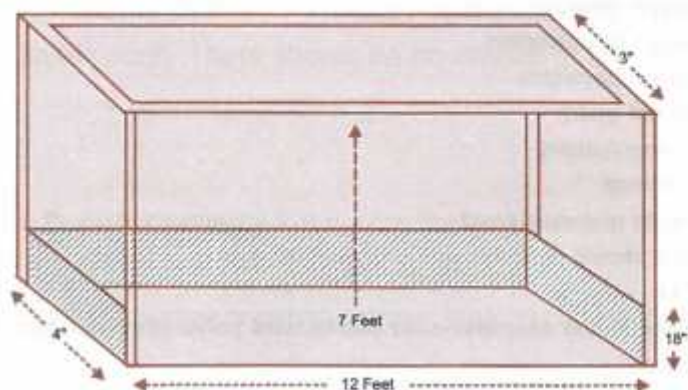


DIAGRAM OF COURT



HOCKEY STICK



GOAL POST

## Fundamental skills

- 1) Holding the stick
- 2) Stroke
  - (i) Push
    - (a) Forward Push
    - (b) Reverse Push
  - (ii) Flick
    - (a) Straight Flick
    - (b) Reverse Flick
    - (c) Flick on the wrong foot
  - (iii) Scoop
    - (a) Push Scoop
    - (b) Shorel Scoop
  - (iv) Drive
  - (v) Jab
- 3) Stopping the Ball
- 4) Dribbling
- 5) Tackling
  - (i) Side Tackle
  - (ii) Front Tackle
  - (iii) Wrong Side Tackle
- 6) Passing
  - (i) Short Pass
  - (ii) Wrong Pass
  - (iii) Through Pass
- 7) Penalty Corner
- 8) Corner
- 9) Push in
- 10) Penalty Stroke
- 11) Goal Keeping
- 12) Shooting
- 13) Dodge
  - (i) Dodging to the opponent left
  - (ii) Dodging to the opponent right
  - (iii) Double Dodging
- 14) Hitting
  - (i) Reverse Hitting
  - (ii) Hitting on the wrong foot
  - (iii) Stationary Ball Hitting
  - (iv) Moving Ball Hitting



Different skills performed by the player



**DIFFERENT SKILLS PERFORMED BY THE PLAYER**

### **TERMINOLOGY**

- |                   |                  |                 |
|-------------------|------------------|-----------------|
| 1. Right Back     | 2. Clear         | 3. Flick        |
| 4. Link           | 5. Through Pass  | 6. Sweeper      |
| 7. Scoop          | 8. Tackling      | 9. Lunge stroke |
| 10. Jab Stroke    | 11. Melee        | 12. Free Hit    |
| 13. Under Cutting | 14. Tie Breaker  | 15. Push in     |
| 16. Astro - Turf  | 17. Sudden Death | 18. Roll on     |
| 19. Carried       | 20. Reverse Hit  |                 |

### **A BRIEF EXPLANATION**

#### **1. TIE BREAK :**

When no one team is able to score goal up to extra time, five penalty hits are given to each team. It is called tie break.

#### **2. SUDDEN DEATH :**

When a duration of game is up, in an equal score, the time is extended for 15 minutes. The play may be extended for another 15 minutes if no team scores goal. Then the tie break rule is applied. When no goal is scored even after tie break, one penalty hit is given to each goalkeeper of the team. This is known as sudden death.

#### **3. SWEEPER :**

Free defender who covers and roams behind defense, picking-up all through passes and taking on forward with ball who get free.

#### **4. THROUGH PASS :**

Pass that goes parallel to side line between opponent.



**5. SCOOP :**

Scoop is a stroke in which a ball is lifted up with the flat portion of the hockey stick blade.

**6. CARRIED :**

When a ball hits or touches on the feet of a player.

**7. LINK :**

Mid fielders play both offence and defence.

**IMPORTANT TOURNAMENTS**

**A. NATIONAL**

1. National Hockey Championship (for both men and women)
2. Beighton Cup Tournament
3. Agha Khan Cup
4. Bombay Gold Cup
5. Obeidullah Khan Gold Cup
6. Jawahar Lal Nehru Hockey Tournament
7. Junior Nehru Hockey Tournament
8. Dhyan Chand Hockey Tournament
9. Scindia Gold Cup
10. Prime Minister Gold Cup
11. Federation Cup (Women's)
12. Modi Gold Cup

**B. INTERNATIONAL**

1. Olympic Hockey Championship.
2. World Cup
3. Asian Hockey Federation Cup
4. Azlan Shah Hockey Tournament
5. Afro Asian Games
6. European Championship
7. Champions Trophy

**VENUES**

1. National Stadium, New Delhi
2. Shivaji Stadium, New Delhi
3. National Sports Institute, Patiala
4. Sports College, Bangalore
5. Dhyan Chand Stadium, Lucknow
6. Railway Stadium, Gwalior
7. Railway Stadium, Chandigarh
8. Railway Stadium, Mumbai
9. Railway Stadium, Amritsar

**FAMOUS SPORTS PERSONALITIES**

**A. NATIONAL**

1. Dhyan Chand
2. K.D. Singh
3. Ajit Pal Singh
4. Prithivi Pal Singh
5. Lakshman
6. Roop Singh
7. Dhanraj Pillai
8. Duleep Tirki
9. Pargat Singh
10. Versa Soni
11. Somaya
12. Rekha
13. Rupa Saini
14. Gagan Ajit Singh
15. Mukesh Kumar Tirki

**B. INTERNATIONAL**

1. K. Fisher
  2. Walker Freed
  3. A. Becker
  4. B. Bermingham
  5. Kin Wark
  6. Shahabaz Ahmad
  7. Tahir
  8. Mohd. Yusuf
-

## **AWARDS**

### **A. ARJUN AWARDEE :**

1. 1961 Prithpal Singh and Ann Lumsden
2. 1965 Udham Singh & Elvera Britto
3. 1970 Ajit Pal Singh
4. 1973 M.P. Ganesh
5. 1980 Mohd. Shahid, Eliza Nelson
6. 1992 Morvin Fernandes
7. 1998 Baljeet Dhillan, Baldev Singh, M.K. Kaushik
8. 2000 Bajleet Singh Saini, Tigolia Chanu, R.S. Bhola, Balkishan Singh, Jalaludin Rizvi, Madhu Yadav.
9. 2003 Devesh Cauhan, Suraj Lata Devi.

### **B. PADAMSHRI AWARDEE**

- |                     |                     |
|---------------------|---------------------|
| 1. Dhayan Chand     | 2. K.D. Singh       |
| 3. Balbir Singh     | 4. Charanjeet Singh |
| 5. Jeevan Pal Singh |                     |

### **C. RAJIV GANDHI KHEL RATAN AWARDEE**

- |                   |   |      |
|-------------------|---|------|
| 1. Dhanraj Pillai | - | 1999 |
|-------------------|---|------|

### **D. DRONACHARYA AWARDEE**

- |                   |   |      |
|-------------------|---|------|
| 1. M.K. Kaushik   | - | 2002 |
| 2. Rajindra Singh | - | 2003 |

### **E. DHYANCHAND AWARDEE**

- |                      |   |      |
|----------------------|---|------|
| 1. Dharam Singh Mann | - | 2002 |
| 2. Hardayal Singh    | - | 2003 |
-

# KHO - KHO

## HISTORY

Kho-Kho originated in India and it is very popular in rural areas. This game is extremely popular in Maharashtra. Kho-Kho is a Marathi word which means "Go and Catch". The popularisation and development of this game has been associated with the development of Akharas and Vyayamshalas in Maharashtra. Rules and regulations of the game were framed at a conference organised by the Deccan Gymkhana. In 1914, the Deccan Gymkhana conducted first tournaments of Kho-Kho. Again in 1919 and 1928 the Deccan



Gymkhana authorities revised the rules of Kho-Kho and published them. Modern form to this game was given by the Hanuman Vyayam Pracharak Mandal, Baroda. Akhil Maharashtra Sharirik Shikshan Mandal which was formed in 1928, helped a lot in the development and popularisation of this game. Later in 1935, the Akhil Maharashtra Sharirik Shikshan Mandal again systematised and published the rules of this game. In 1960, Kho-Kho Federation of India was formed. In the same year, the first National Championship (men) was organised and for women in 1961. It was first introduced for demonstration in the 1982 Asian games, which were held in Delhi but it has not been included in Asian Games so far.

## BASIC RULES

### 1. Field

The Kho-Kho playing field should be rectangular in shape with end lines 16 m long and side line 29 m long.

### 2. Centre line

It is a 30 cm broad rectangle along the length of the court that divides it into two equal halves.

### 3. Square

Each square of 30 cm x 30 cm formed by the intersection of centre lane and cross lane is called a square.

### 4. Free Zone

Free zone or rectangle is the area 16 m x 2.75 m at the end of the court.

### 5. Line width

The width of each line should be at least 3 cms and it should be included in the measurements.

### 6. Post

Two strong wooden or metal posts shall be firmly fixed. They shall be 120 cm above and perpendicular to the ground. The top of the post shall be flat and free for sharp edges.

### 7. Equipment

The equipment used in Kho-Kho are posts, strings, measuring tape (metallic), lime powder, wire, nails, two stop watches, two types of rings having inner circumference of 30 cm and 40 cm, score sheets and stationery to write results etc.

## RULES OF THE GAME

1. There will be 2 innings of chasing and defending turn in a match.

2. The chasing and defending turn should be of nine minutes.

3. The intervals between chasing and defending turn should be of nine minutes

---



5. A toss of coin should decide the right to choose chasing or defending.
6. Only three runners are allowed inside the field for defence and once they are out the next three enter the field before two 'khos' are given.
7. The captain may end their turn before allowed time.
8. The team who scores more points wins a match.
9. One point is awarded for putting out each runner.
10. Once all the runners are out before time they send their runner again in the same order.
11. Chaser should not leave the square without getting 'kho'.
12. Chaser has to give 'kho' from behind a sitting chaser loudly.
13. He can change a direction in free zone only.
14. In case of tie, one more inning is to be played and if it remains the same, another inning should be started. As soon as the first point is scored by the chaser, the turn should be stopped and time taken by the chaser in scoring this point should be noted. Now the chaser should take the defending turn and the time taken by the opponent for scoring the first point should be noted. The side which has taken less time to score a point wins a match.
15. A team can ask the defenders to follow on if their score is more than the score of the defenders by a margin of atleast nine points.

### **LATEST GENERAL RULES**

1. The court measurements have changed now, The length of court is 29 m and width is 16 m.
2. Pole to pole distance is 23.50 m.
3. Each team plays for 9 minutes. instead of 7½ minutes.
4. If 3 runners are made out, consecutively by an active chase, he cannot touch the fourth runner, he will have to 'kho' to any sitting chaser.

### **MEASUREMENTS OF PLAYFIELD AND SPECIFICATIONS OF SPORTS EQUIPMENT**

#### **PLAYING FIELD (RECTANGULAR)**

Total area including lobby	:	33 m X 21 M
Seniors and Juniors (Male and Female)		
Length of the playing field	:	29m
Breadth of the playing field	:	16m
Length of centre lane	:	23.5 m
Breadth of centre lane	:	30 cm
Free zone area on each side	:	2.75m x 16 m
Cross lane area	:	16m x 30 cm
Area of two rectangles at the end of playing field	:	16m x 2.75m
(adjoining free zone)	:	16m x 2.50m
Area of the rest rectangles	:	16m x 2.30 m
Length of each rectangle	:	7.85 m
Pole height	:	1.20 m above the ground
Pole circumference	:	9 to 10 cm

#### **COMMON**

(Senior, Junior and Sub-Junior) Breadth of cross lane	:	30 cm
(Intersecting at right angles) Width of all lines	:	3 cm (min.)
Number of squares	:	8
Area of each square	:	30 cm x 30 cm

**Post**

(wooden, smooth, flat and free from sharp edges)

Circumference : 30-40 cm

Height (perpendicular to the ground) : 120 cm - 125 cm

**Equipment For Field And Officials**

Post/2, Stop watches/2, Measuring steel tape, Rings/2 (9 cm and 10 cm inner dia), Score board, Lime powder, String, Score and time record sheets, time indicating plates 30 cm x 20 cm with handle 30 cm in length and numbers 20 cm in height, cards 10 cm (height) x 7 ½ cm (width) red and yellow for each court.

**Clothing**

T-shirt, shorts, knee caps, anklets.

**Officials**

Umpires / 2, Referee/1, Timekeeper/1, and Scorer/1.

**Players**

Players in each team : 8+1 active chaser

Substitutes : 3

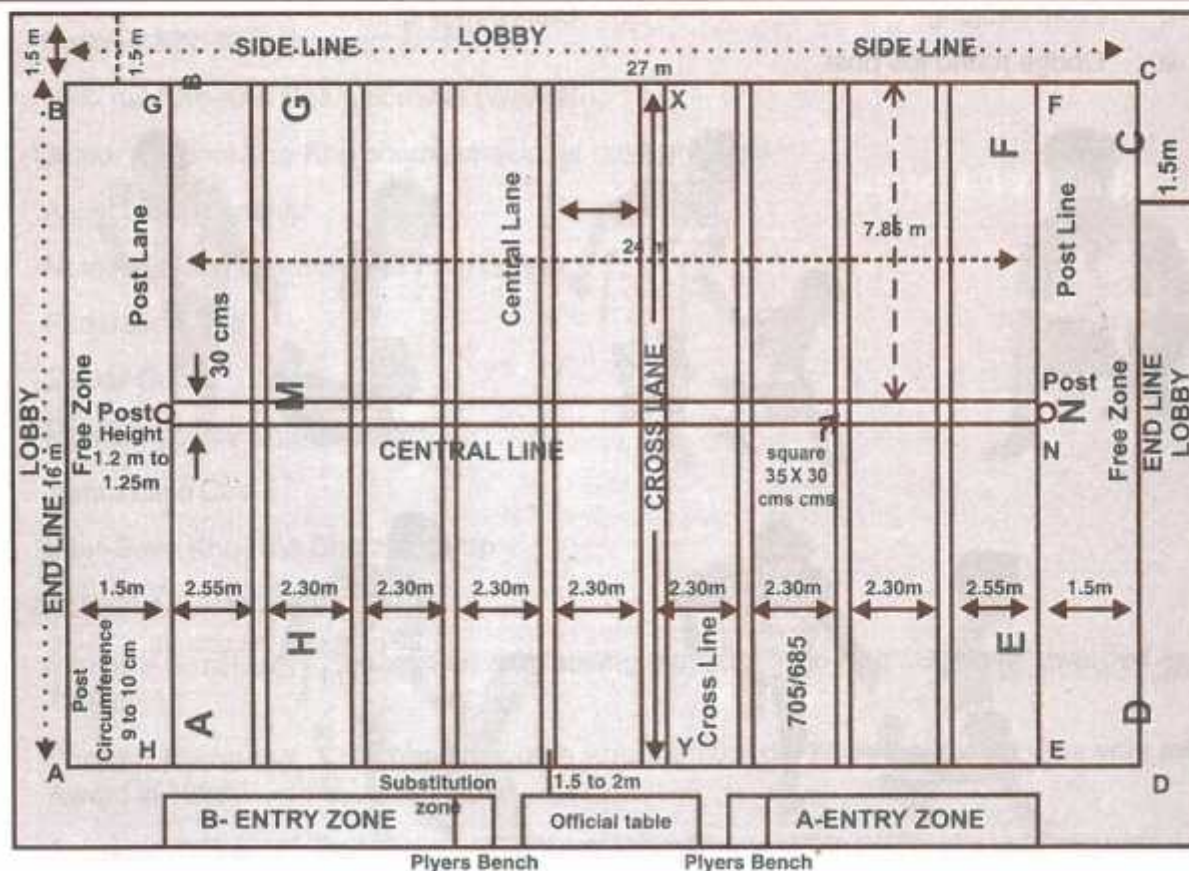
Players sitting in the squares (4 facing one side line and four facing other side line alternately) to tag and touch will be the chasers whereas those inside the field to defend will be the defenders. The player to chase the defender is known as active chaser or attacker. The attacker will utter only "Kho" loudly and distinctly touching the sitting chaser in the square by hand from behind him who cannot cross the centre lane.

**Duration of Game**

Men : 55 minutes ( 9-5-9-9-5-9 )

Women : 32 minutes ( 7-2-7-7-2-7 )

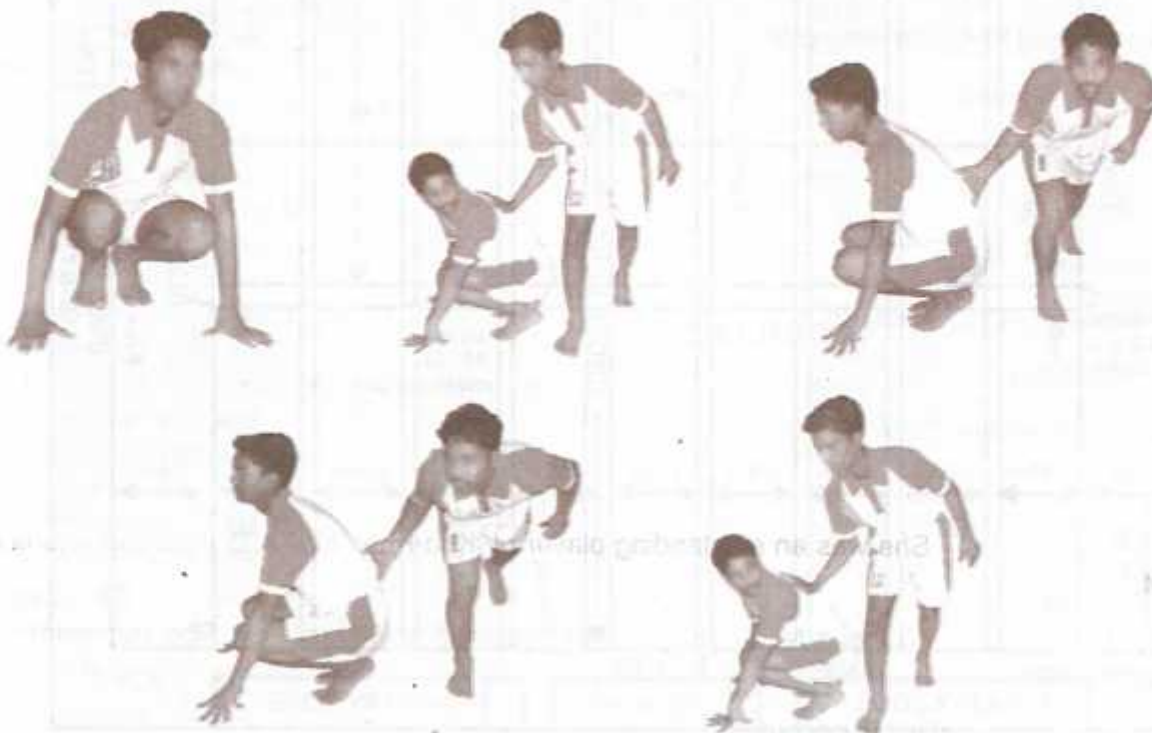
No. of Innings : 4



**DIAGRAM OF COURT**

## FUNDAMENTAL SKILLS

- I. Giving 'Kho'
  - i. Simple 'kho'
  - ii. Late 'kho'
  - iii. Advance or Early 'kho'
  - iv. Judgement 'kho'
- II. Chasing Skill
  1. Sitting in the square
    - i. Parallel toe method
    - ii. Bullet toe method
  2. Diving
    - i. Sitting (Spot) diving
    - ii. Running dive
    - iii. Pole turning dive
    - iv. Side dive
  3. Tapping
  4. Covering
  5. Sudden change of the direction
  6. Trapping
  7. Foot Dragging
- III. Running Skill
  1. Entering the court
  2. Positioning on the post
  3. Running
    - i. Single chain
    - ii. Double chain
  4. Dodging
    - i. Front dodging
    - ii. Back dodging
    - iii. Dodge round the post



DIFFERENT SKILLS PERFORMED BY THE PLAYER



## TERMINOLOGY

- |                         |               |
|-------------------------|---------------|
| 1. Runner               | 2. Free zone  |
| 3. Cross lane           | 4. Chase      |
| 5. Active chaser        | 6. Square     |
| 7. Tapping              | 8. Trapping   |
| 9. Feet out             | 10. Inning    |
| 11. Minus kho           | 12. Pole lane |
| 13. Double chain system | 14. Entry     |

## A BRIEF EXPLANATION OF SOME OF THE TERMS

- Chaser** : The participant player sitting in the square is known as chaser.
- Runner** : The runners are those players who are chased by an active chaser. He wants to touch or tap them.
- Active Chaser** : An active chaser is a player who pursues the players of the opposite side with a view to tap and touch them.
- Feet Out** : If both feet of the runner touch the ground beyond side lines the player is given out.
- Square** : It is a place for the chasers to sit down.
- Inning** : The nine minute duration of the game, may be either chasing or running is known as inning.

## IMPORTANT TOURNAMENTS

- National Kho-Kho championship (Men)
- National Kho-Kho Championship (Women)
- Junior national Kho-Kho championship for boys and girls
- Asian championship
- Netaji Subhash International Tournament
- Federation Cup
- Shivaji Cup
- Inter-University Championship
- Nehru Gold Cup
- Inter-State Kho-Kho Championship

## FAMOUS PERSONALITIES

- Neelima Sarolkar** : She was an outstanding player of 'Kho-Kho'. She was awarded Arjuna Award in 1974.
  - Shobha Narayana** : Shobha Narayana was the famous 'Kho-Kho' player. She was awarded Arjuna Award in 1998.
  - Surekha Kulkarni** : Due to her outstanding achievement in 'Kho-Kho' she was awarded Arjuna Award in 1998.
-

## **SPORTS AWARDS**

### **ARJUNA AWARDEE**

- |    |                                      |   |      |
|----|--------------------------------------|---|------|
| 1. | Sudhir Prabhakar                     | - | 1970 |
| 2. | Bhavna Hasmukhlal                    | - | 1973 |
| 3. | N.C. Sarolkar                        | - | 1971 |
| 4. | Usha Vasant Nagorkar<br>R.J. Inamdar | - | 1975 |
| 5. | R.R. Dharwardkar                     | - | 1976 |
| 6. | Sushma Sarolkar<br>H.M. Takalkar     | - | 1981 |
| 7. | Prakash                              | - | 1984 |
| 8. | Shobhe Narayana Surekhe Kulkarni     | - | 1999 |

### **DRONACHARYA AWARDEE**

- |                    |   |      |
|--------------------|---|------|
| E. Gopal Purshotam | - | 2001 |
|--------------------|---|------|

## Practical-1: Fitness tests administration for all items.

Motor fitness is a term that describes an athlete's ability to perform effectively during sports or any other physical activity.

Motor Fitness Test –

- |                        |                              |
|------------------------|------------------------------|
| 1. 50 M Standing Start | 2. 600 M Run/Walk            |
| 3. Sit & Reach Test    | 4. Partial Curl Up           |
| 5. Push Ups (Boys)     | 6. Modified Push Ups (Girls) |
| 7. Standing Broad Jump | 8. Shuttle Run (4x10 M)      |

### 1. 50 M Standing Start

- i. **Purpose:** The aim of this test is to determine acceleration and speed.
- ii. **Equipment required:** measuring tape or marked track, stopwatch, cone markers, flat and clear surface of at least 70 meters.
- iii. **Procedure:** The test involves running a single maximum sprint over 50 meters, with the time recorded. A thorough warm-up should be given, including some practice starts and accelerations. Start from a stationary standing position (hands cannot touch the ground), with one foot in front of the other. The front foot must be behind the starting line. Once the subject is ready and motionless, the starter gives the instructions "set" then "go." The tester should provide hints for maximizing speed (such as keeping low driving hard with the arms and legs) and the participant should be encouraged to not slow down before crossing the finish line.
- iv. **Results:** Two trials are allowed, and the best time is recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system is triggered, and finishes when the chest crosses the finish line and/or the finishing timing gate is triggered.
- v. **Target population:** soccer other sports in which speed over a similar distance is important.
- vi. **Reliability:** Reliability is greatly improved if timing gates are used. Also weather conditions and the running surface can affect the results, and these conditions should be recorded with the results- If possible, set up the track with a crosswind to minimize the effect of wind.

### 2. 600 M Run/Walk

- i. **Purpose:** The aim of this test is to determine acceleration and speed.
- ii. **Equipment required:** oval or 400m running track, stopwatch recording sheets.
- iii. **Procedure:**, The aim of this test is to complete the 600 meter course in quickest possible time. To start, all participants line up behind the starting line. On the command 'go,' the clock will start, and they will begin running at their own pace. Cheering or calling out the elapsed time is also permitted to encourage the participants to achieve their best time.
- iv. **Scoring:** The total time taken to run 600m is recorded.
- v. **Reliability:** The reliability of this test would depend on practice and pacing strategies and motivation level. There should be good reliability if these issues are addressed.
- vi. **Advantages:** Large groups can be tested at once, and it is a very cheap and simple test to perform-
- vii. **Disadvantages:** Practice and pacing are required to maximize the subject performance, and also the test results can be affected greatly by motivation.

### 3. Sit and Reach Test



The sit and reach test was first propounded by Wells and Dillon in 1952. This test is widely used as normal test of flexibility.

- i. **Purpose:** The sit and reach test is a significant test to measure the flexibility of hip region including the lower back and hamstring muscles. Generally it is noted that owing to the lack of flexibility in this region there is greater risk of injury. It is also entangled with lumbar lordosis and lower back pain.
- ii. **Equipment's Required:**
- iii. Sit and reach box or a makeshift ruler and a box may be used in which zero mark can be adjusted for each individual according to their sitting reach level because there is a variation of lengths of individual's arms and legs.
- iv. **Procedure:** First of all, shoes and socks should be removed. Then sit down on the floor with legs stretched out straight ahead. The soles of the feet should be kept flat against the box. Both the knees should be locked and pressed flat to the floor. An assistant may hold the knees down. Palms should be facing downwards. Hands should be on the top of each other or side by side. The individual, whose flexibility is to be measured, tries to extend his both hands forward along the measuring line on the box as far as he can extend. His finger tips of both hands should remain equal and at the same level. He should not jerk or bounce to reach at maximum distance. He should hold the full reach position for two seconds and the score should be recorded. Generally in such test warm up is not allowed, however, the results can be attained after suitable warm up. In case of sliding ruler or makeshift ruler the zero mark should be at the fingertips. If it is not available or simple marking is there the zero mark should be 9 inches before the feet.
- v. **Scoring:** The score is recorded to the nearest centimetre or half inch as the distance reached by the fingertips of both hands.
- vi. **Advantages:**  
A It is a simple test to know the flexibility.  
B It is an easy test to perform.
- vii. **Disadvantages:** This test is good for flexibility of joints of lower back and hamstrings and not related to the flexibility of other joints of the body.



#### 4. Partial Curl Up

- i. **Purpose:** The partial curl-up test measures abdominal strength and endurance, important in back support and core stability.
- ii. **Equipment required:** A flat, clean, cushioned surface, stopwatch, recording sheets, pen, and a metronome (or audio tape, drums).
- iii. **Procedure:** In this test the partner sits behind, the subject and cups the subject's head in their hands. The starting position is with the arms fully extended with fingers resting on the legs and pointing toward the knees. The subject curls-up slowly; sliding the fingers along the legs until the fingertips touch the knees, then back down again, until the head touches the partner's hands. One complete curl-up is completed every three seconds, and are continued until exhaustion (e.g. the subject cannot maintain the rhythm or has reached the target number for the test).
- iv. **Scoring:** The completion of one complete curl-up counts as one. Make sure that the subject does not "bounce" off the floor – only correctly performed curl ups should be counted. The timer begins the test by calling out the signal "ready? Go!". The stop watch is started at the same time, and at the conclusion of one minute the timer calls out "Stop" at which counting and the subject stop.
- v. **Advantages:** This test is simple and quick to perform requiring minimal equipment, and large groups may be tested at once.
- vi. **Disadvantages:** The partial curl-up test in which the feet are not supported measure of abdominal strength and endurance.

#### 5. Push Ups (Boys)

- i. **Purpose:** The aim of this test is to determine upper body strength and endurance.
- ii. **Equipment required:** Floor mat, PACER d with push up track.
- iii. **Procedure:** start in the push-up position - with the hands and toes touching the floor, the body and legs are in a straight line, feet slightly apart, and the arms at shoulder width apart, extended and at a right angle to the body. Keeping the back and knees straight, the subject lowers the body until there is a 90-degree angle at the elbows, with the upper arms parallel to the floor. A partner holds their hands at the point of the 90-degree angle so that the subject being tested goes down only until their shoulder touches the partner's hand, then back up. The push-ups are done in time to a metronome or similar device with one complete push-up every three seconds (1.5 seconds down and 1.5 seconds up, 20 complete push-ups per minute). The subject continues until they can do no more in rhythm (has not done the last three in rhythm) or has reached the target number of push-ups.
- iv. **Scoring:** Record the number of correctly completed push-ups that were performed in time to the rhythm.
- v. **Advantages:** This test is easy and quick to perform.

## 6. Modified Push Ups (Girls)

- i. **Purpose:** To measure the muscular strength of arms, upper body and the core.
- ii. **Equipment required:** Floor mat, PACER d with push up track.
- iii. **Procedure:** The push-up begins in a kneeling position, with the hands and knees touching the ground. The knees are kept slightly apart; the arms are at shoulder width apart, extended and at a right angle to the body. Keeping the back straight and holding the core tight, the student lowers the body until there is a 90-degree angle at the elbows, then returns to the starting position with the arms extended. The action is repeated until exhaustion or until the time limit is reached. In case of timed tests, the maximum numbers of correct push-ups performed are noted.
- iv. **Benefits of Modified Push-Ups:** There are many benefits to the Modified Push-Ups and just as many reasons you should incorporate them into your workouts. Push-ups are one of the best exercises anyone can do, but women especially! All in one exercise, you get the benefit of toning your arms, chest, shoulders, and core. Push ups tone up basically your entire upper body all the while helping you to torch calories and reveal toned and tight arms, shoulders, and abs. Here are just a few benefits of modified push-ups:

## 7. Standing Broad Jump (Long Jump)

- i. **Purpose:** To measure the explosive power of the legs
- ii. **Equipment required:** The measure to measure distance jumped, non-slip floor for take-off, and soft landing area preferred. Commercial Long jump Landing Mats are also available.
- iii. **Procedure:** A take-off line is marked on the ground. Subjects stand just behind the line with the feet several inches apart. The subject swings the arms and bends the knees to take a jump. Landing should be on both legs. Three trials are given to the subject. The distance is measured from the take-off line to the heel or other part of body that touches the ground nearest to the take-off line. Best of three will be counted.
- iv. **Scoring:** The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts.
- v. **Advantages:** This test is simple and quick to perform, requiring minimal equipment.
- vi. **Disadvantages:** There is some skill component in this test.

## 8. Shuttle Run (4×10 M)

- i. **Purpose:** This is a test of speed, body control and the ability to change direction (agility).
- ii. **Equipment required:** Two wooden blocks for each runner (each block should measure 10 x 5 x 5 cm), marker cones or marking tape, measurement tape, stopwatch, flat non-slip surface, with two lines 10 meters apart.
- iii. **Procedure:** 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, "got" 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.
- iv. **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. A trial is void if a block is dropped or thrown. ,
- v. **Advantages:** This test can be conducted on large groups relatively quickly with minimal equipment required.

## Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.

### (I) Obesity

Obesity is that condition of the body in which the amount of fat increases to extreme levels. In other words, obesity can be defined as ‘the condition when an individual weight 20 percent more than the ideal weight’.

#### 1. Vajrasana

**Procedure:** it is a meditative asana. Kneel down on the ground with your knees, ankles and toes touching the ground. Your toes should be stretched backwards. Now place your palms of both your hands on the knees. The upper body should be straight. At this time, the breathing should be deep, even and slow. Then expand your chest and pull your abdominal portion inwards.

#### Benefits:

1. It helps in reducing hip fat.
2. It enhances memory power.
3. It cures the problems related to menstruation.
4. It cures mental stress.
5. It strengthens the pelvic muscles.
6. It removes postural defects.
7. It prevents hernia and gives relief from piles.
8. It is the best meditation asana for people suffering from sciatica and sacral infections.
9. It is helpful in curing dysentery, back pain and chest diseases and also helpful for concentration.
10. It gives relief from constipation, acidity and increases digestive process.



#### Contraindications:

1. A person suffering from joint pain should not perform Vajrasana.
2. The individuals who have and spinal column problem should not perform Vajrasana.
3. The individuals who have some difficulty in movement should practise Vajrasana with a lot of care.

#### 2. Trikonasana

**Procedure:** first of all stand with your legs apart. Then raise the arms sideways up to the shoulder level. Bend the trunk sideways and raise the right hand upward. Touch the ground with left hand behind left foot. After some time, do the same asana with opposite arm in the same way.

#### Benefits:



1. It strengthens the legs, knees, arms and chest.
2. It helps in improving digestion and stimulates all the abdominal organs.
3. It increases mental and physical equilibrium.
4. It reduces stress, anxiety, back pain and sciatica.
5. It helps in increasing height.
6. It helps in reducing obesity.
7. It enhances blood circulation.
8. It is also helpful in reducing excess fat around the waistline.

#### **Contraindications:**

1. If you are suffering from diarrhoea, low or high blood pressure, back injury or migraine, avoid the practice of it.
2. The individual having cervical spondylitis should not perform this asana.
- 3.



**Trikonasana**

## **(II) Diabetes**

It is really a very dangerous condition. If diabetes is not controlled, it can lead to renal failure, loss of vision, amputation of limbs and cardiovascular diseases. Diabetes is such a disorder that is caused sugar to build up in our stream instead of being used by the cells in our bodies. In fact, our body uses a hormone (insulin) to control the level of sugar in our blood. When our body does not produce sufficient amount of insulin or when insulin does not work properly, diabetes occurs. It is of two types.

**Type I:** in this type, the pancreatic gland does not produce insulin. Hence injection of insulin is required daily for its treatment.

**Type II:** in this type, the body does not produce sufficient amount of insulin or the insulin is produced sufficiently but it is not used properly by the body.

### **1. Bhujangasana**

**Procedure:** in this asana, the shape of the body remains like a snake that is why it is called bhujangasana. In order to perform this asana, lie down on the belly on the ground. Keep your hands near the shoulders. Keep your legs close together. Now, straighten up your arms slowly, raise the chest. Your head should turn backwards. Keep this position for some time. Then get back to the former position. For good result, perform this asana 3 to 5 times.

#### **Benefits:**

1. It alleviates obesity.
2. It provides strength and agility.
3. It cures the disorders of urinary bladder.
4. It cures the diseases of liver.
5. It improves blood circulation.
6. It makes the vertebral column flexible and thin.
7. It cures gas disorders, constipation and indigestion.
8. It strengthens the muscles of hands.



**Bhujangasana**

#### **Contraindications**

1. This asana should be avoided by individuals who suffer from hernia, back injuries, headaches and recent abdominal surgeries.
2. Pregnant women should not perform this asana.

### **2. Paschimottanasana**

**Procedure:** Sit on the ground with legs forward. Then hold the toes of your feet with the fingers of both hands. Then breathe out slowly and try to touch the knees with your forehead. After that breathe in slowly, raise your head upwards and come to the prior position. Perform this asana at least 10 to 12 times.

#### **Benefits:**

1. It takes care of gas trouble.
2. It prevents the early ossification of bones.
3. It is a good remedy for constipation.
4. It helps to overcome several menstrual disorders.
5. It gives relief in sciatica, backache and asthma.
6. It reduces obesity.
7. It is helpful in treating abdominal diseases.



**Paschimottanasana**

8. It is helpful in curing skin diseases.
9. Vertebra becomes flexible and healthy.

#### **Contraindications**

1. If you are suffering from enlarged liver or spleen or acute appendicitis, you should never do this asana.
2. Avoid practising this asana if you suffer from asthma or any respiratory diseases.

If you have any back or spinal problem, make sure that you perform this asana only under expert guidance.

### **(III) Asthma**

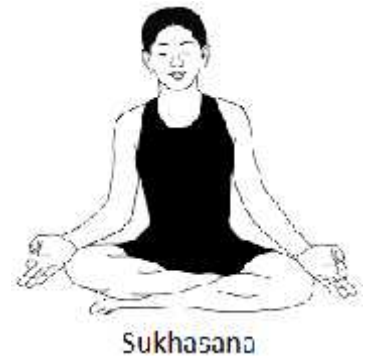
Asthma is a disease of lungs in which the airways become blocked or narrowed causing difficulty in breathing. In asthma, the airways also swell up and produce extra mucus. It usually triggers coughing, wheezing or whistling and shortness of breath.

#### **1. Sukhasana**

**Procedure:** Sit down with the legs straight in front of the body. After that, bend the right leg and place the foot under the left thigh. Then bend the left leg and keep the foot under the right. Place the hands on the knees. Chin should be in. Keep the head, neck and back straight, close the eyes. Relax your body.

#### **Benefits:**

1. It facilitates mental and physical balance without causing strain or pain.
2. It stretches and lengthens spine.
3. It calms your mind.
4. It enhances your condition of peace.
5. It reduces anxiety, stress and mental fatigue.
6. It helps in improving body posture.
7. It provides gentle massage to knees, calf muscles and thighs.
8. It spreads a sense of calmness throughout your body and mind.



#### **Contraindications**

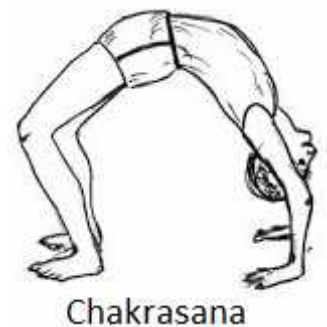
1. If your knees and hips are injured or inflamed, you should avoid practising this asana.
2. If you have a slip disc problem, you should take proper care while performing this asana.

#### **2. Chakrasana**

**Procedure:** In this asana, the figure of the body becomes like a chakra, therefore, this asana is called chakrasana. First of all, lie down on your back. Fix your hands firmly on the ground. Then raise the middle portion of your body upwards. Raise it as high as possible, so that your body is in semi-circle position. Then keep your head downwards between your hands. In the beginning, keep this position for one minute and then after some days of practice, do it for 3 to 5 minutes.

#### **Benefits:**

1. It cures back pain.
2. It cures any pain in kidneys
3. It is helpful in removing obesity.
4. It prevents the problem of hernia.
5. It stimulates pituitary and thyroid gland.
6. It cures infertility, asthma and osteoporosis.
7. It gives relief from stress and reduce depression.
8. The semi-circular position makes the dorsal side of the body to stretch making the chest to expand. Thus more fresh oxygen is made available.



#### **Contraindications**

1. If you suffer from headache or high blood pressure you should not perform this asana.
2. Don't perform this asana in case of shoulder impingement.
3. Do not perform this asana if you have tendonitis in the wrists.
4. Individuals who suffer serious spinal column ailments such as cervical and lumbar spondylitis should avoid the practise of this asana.

## (IV) Hypertension

It means increased blood pressure. It has become a worldwide health problem because a great number of people are facing the problem of hypertension throughout the world. Though, it is a fact that blood pressure increases with the advancement of age. In yesteryears, hypertension used to be considered a middle-age problem but nowadays, youngsters also suffer from this problem due to their faulty lifestyles.

### 1. Tadasana

**Procedure:** Stand up in attention position. Lift your arms upwards. Stretch your hands upwards. Raise your heels, and come on your toes. Also pull up your body upwards. After some time breathe out slowly and come to the previous position. Repeat the same exercise 10/15 times.

#### Benefits

1. It is helpful in developing physical and mental balance.
2. It reduces obesity.
3. It cures constipation.
4. It cures digestive problems.
5. It improves body posture.
6. It alleviates sciatica.
7. It is an excellent asana for those who want to enhance their height.
8. It is beneficial in treating hypertension.

#### Contraindications

1. If you have low blood pressure you should not practise this asana.
2. In case of headache or insomnia you should avoid the practise of this asana.
3. Individuals, who suffer from blood circulation problems such as faulty valves, should not perform this asana.



Tadasana

### 2. Ardha Chakrasana

**Procedure:** Stand straight with both feet together. Hold your hips with your hands. Bend backward without bending your knees with slow inhalation. Remain in this pose for some time. Do it two to three times.

#### Benefits

1. It helps to make ankles, thigh, shoulders, chest, spine and abdomen strong.
2. It relieves stress and tension.
3. It improves digestion.
4. It cures menstrual disorders.
5. It cures pain in legs.
6. It reduces fat in the waist and thigh.
7. It helps to alleviate upper back pain.
8. It relieves stress in the neck and shoulders.

#### Contraindications

1. Avoid this asana in case of hip or spinal problems.
2. Avoid practising this asana if you have peptic ulcer and hernia.
3. Avoid performing this asana if you have migraine, headache, low blood pressure, diarrhoea and insomnia.
4. Pregnant women should avoid doing this asana.



Ardha Chakrasana

## (V) Back Pain

The pain which is felt in the back, usually originates from the bones, joint, muscles, nerves, etc. It may be in the cervical, thoracic or lumbar region. It may be spontaneous or can be chronic. It can be constant, affecting one region or radiate to other parts such as arms, hips or legs. It may give a feeling of burning sensation. Sometimes numbness may be felt in the legs or arms. The affected persons are not able to do their work smoothly and efficiently.

Back pain may result owing to bad personal health habits and personal risk factors such as overweight, lack of physical activity or exercise, excessive smoking, lack of flexibility or undue stress on back.



## 1. Ardhamatsyandrasana

**Procedure:** The left heel is kept under the right thigh and right leg is crossed over the left thigh. After that hold the right toe with left hand and turn your head and back to the right side. In this position move the trunk sideways. Then perform the same asana in the reverse position.

### Benefits:

1. It keeps gall bladder and the prostate gland healthy.
2. It enhances the stretchability of back muscles.
3. It alleviates digestive ailments.
4. It regulates the secretion of adrenaline and bile and thus is recommended in yogic management of diabetes.
5. It is also helpful in treating sinusitis, bronchitis, constipation, menstrual disorders, urinary tract disorders and cervical spondylitis.



### Contraindications:

1. Women, who are two or three months pregnant should avoid practising this asana.
2. The individuals, who suffer from peptic ulcer, hernia or hypothyroidism, should practise this asana only under expert guidance.
3. The individuals who have the problem of sciatica or slipped disc may benefit from this asana but they need to take great care while doing this asana.

## 2. Shalabhasana

**Procedure:** In order to perform shalabhasana, lie down in prostrate position. Spread the thigh backwards. Hold your fists and extend arms. Keep your fists under the thigh and then raise your legs slowly as high as you can. For best results hold this position for two or three minutes and then lower your legs slowly. Repeat the same action for three to five times.

### Benefits

1. It alleviates lower back pain.
2. It helps in removing constipation.
3. It improves posture.
4. It stimulates abdominal organs.
5. It helps in relieving stress.
6. It provides relief to persons who have mild sciatica and slip disc problem.
7. It strengthens the muscles of the spine, buttocks and back of the arms and legs.



### Contraindications

1. People with a weak spine should avoid the practice of this asana.
2. The individuals with a weak heart, high blood pressure and coronary problems should avoid practising this asana.