

Chapter One: The Historical Development of Racket games

1.1 Introduction

Racket games are games which played by using rackets to strike the ball. Generally there are more than twenty racket games with their own unique equipment, playing court dimension, and rule and regulations of the game. But, in this course we will deal with the three of these racket games (Table Tennis, Badminton and Ground Tennis). Accordingly the historical development, the techniques and tactics, and the rule and regulations of each game are explained in this paper.

1.2 The Historical Development of Table Tennis

Today's popular sport of table tennis has grown considerably since its birth late in the nineteenth century by the upper class in England. It began as a recreational activity and social diversion during the 1880's when adherents of lawn tennis adapted their pastime to be played indoors during the winter season. Referred to as *Whiff-Whaff* or *Gossamer* the game was played with balls made of cork or rubber and wooden paddles covered with dried animal skins.

The game lost its appeal around 1904 and did not revive until after World War I in 1921 when the Ping-Pong association was established in Britain. The name of the association was subsequently changed to table tennis association.

In 1926, the International Table Tennis Federation (ITTF) was formed in Berlin and international laws of the game were adopted. That same year, the first official World Championships were held in London. By this time balls were composed of celluloid and the paddles consisted of sheets of pimped rubber glued to wooden blades. In 1933 the U.S Table Tennis association was formed as one of its affiliates.

In 1988, table tennis became an Olympic sport. The top countries in the world in table tennis for both men and women are China, Korea, and Japan; with a few top men also from Sweden and Germany.

1.3 The Historical Development of Badminton

Badminton takes its name from the country residence 'badminton' of the Duke of Beaufort situated in the southern part of the country of Gloucestershire, England. The game came from the combination of two games; *Poona* and *Battledore*. English army officers serving in India in the 1860s were very much taken by a game which was similar and yet far superior to battledore and shuttlecock, known as Poona. They enjoyed it so much that they took it England with some of the Indian equipment, mainly shuttlecocks.

Some of the officers on leave were friends of the Duke of Beaufort who invited them to play the game at Badminton. Then, the army officers took the sport to India where they played it first in Karachi. The sport possessed wide popularity in India where its first rules were printed in Karachi in 1877.

The badminton association of England was formed in 1893 based on those rules drawn up at Karachi. From England, touring players and teams pioneered and fostered badminton throughout the British Commonwealth and to Denmark and U.S.A.

The International Badminton Federation (IBF) (now known as Badminton World Federation) was established in 1934 with Canada, Denmark, England, France, the Netherlands, Ireland, New Zealand, Scotland, and Wales as its founding members. India joined as an affiliate in 1936. The BWF now governs international badminton and develops the sport globally.

While initiated in England, competitive men's badminton in Europe has traditionally been dominated by Denmark. Asian nations, however, have been the most dominant ones at the world level. Indonesia, South Korea, China, and Malaysia along with Denmark are among the nations that have consistently produced world-class players in the past few decades, with China being the greatest force in both men's and women's competition in recent years.

1.4 The Historical Development of Ground Tennis

The history of the game is varied and ancient. Like most other ball games it was at first a solemn fertility rite in Egypt and elsewhere in the Middle East. Philologists have suggested that the name tennis was adopted from the French exclamation 'tenez'. Another view associates the term tennis with an Egyptian town on Nile known as tinnis in Arabic. Together with court tennis, the 12th century crusaders brought some of its terms to Europe. Thus, the term 'racquet' is derived from the Arab word 'rahat' meaning 'the palm of the hand'.

Records confirm that tennis was played in France in the 12th century at first with the palm of the hand. To soften the blow, players began to wear gloves. At the beginning court tennis was played by Monks. But latter on it became a favorite sport of kings. Because of this reason the game came to be called 'royal tennis'.

After 1800, court tennis began to decline and its place was taken by 'lawn tennis'-its modern adaption. In 1877 the game became truly standardized.

The world's oldest tennis tournament; the Wimbledon championships were first played in London in 1877. In 1874 Mary Outerbridge played the tennis in Bermuda and introduced to U.S.

International Lawn Tennis Federation (ILTF) was established by 12 national associations meeting at a conference in Paris, France on 1 March 1913. The comprehensive rules promulgated in 1924 by the *International Lawn Tennis Federation*. In 1977 it ILTF dropped the word 'lawn' from its title and called ITF, recognizing that most tennis was no longer played on grass.

Tennis withdrew from the Olympics after the 1924 Games; but returned 60 years later under demonstration event in 1984. The success of the event was overwhelming and the IOC decided to reintroduce tennis as a full medal sport at Seoul in 1988.

The ***Davis Cup***, an annual competition between men's national teams, dates to 1900. The analogous competition for women's national teams, the ***Fed Cup***, was founded as the Federation Cup in 1963 to celebrate the 50th anniversary of the founding of the ITF also known as *International Tennis Federation* (ITF).

Chapter Two: Basic skills of Table Tennis Game

2.1 Grip

Grip is the way one chooses to hold his/her table tennis paddle (racquet) in his/her plays. The Laws of Table Tennis do not prescribe the manner in which one must grip the racket, and numerous grips are employed. Though, table tennis players grip their rackets in various ways, their grips can be classified into two major families of styles; *shakehand* and *penhold*

A. Shakehand grip

The shakehand grip is so-named because the racket is grasped as if one is performing a handshake. The shake-hands grip is the prevalent grip of table tennis today used by the majority of recreational and professional players. It is easier to learn than penholder, allowing a broader range of playing styles both offensive and defensive.



Some of the advantages of using the shake-hands grip are:

- ✓ Equally strong forehand and backhand
- ✓ Wide selection of paddles to choose from

B. Penhold grip

The penhold grip is so-named because one grips the racket similarly to the way he/she holds a writing instrument. The style of play among penhold players can vary greatly from player to player. The most popular style, usually referred to as the Chinese penhold style, involves curling the middle, ring, and fourth finger on the back of the blade with the three fingers always remain touching one another.

In contrast, another style, sometimes referred to as the Korean penhold grip, involves splaying those three fingers out across the back of the racket, usually with all three fingers touching the back of the racket, rather than stacked upon one another.

Sometimes a combination of the two styles occurs, where the middle, ring and fourth fingers are straight, but still stacked, or where all fingers may be touching the back of the racket, but are also in contact with one another.

Penhold styles are popular among players originating from East Asian regions such as China, Taiwan, Japan, and South Korea.

Traditionally, penhold players use only one side of the racket to hit the ball during normal play, and the side which is in contact with the last three fingers is generally not used. This configuration is sometimes referred to as "traditional penhold" and is more commonly found in square-headed racket styles.

However, the Chinese developed a technique in the 1990s in which a penholder uses both sides of the racket to hit the ball, where the player produces a backhand stroke (most often topspin) by turning the traditional side of the racket to face one's self, and striking the ball with the opposite side of the racket. This stroke has greatly improved and strengthened the penhold style both physically and psychologically, as it eliminates the strategic weakness of the traditional penhold backhand.



Some of the advantages of using the pen-hold grip are:

- A dominant forehand game
- An element of surprise against opponents unfamiliar with the grip

2.1.2 Ready stance/ Footwork

The typical table tennis stance is a slight crouch forward, feet shoulder-width apart. Make sure you bend your knees and ankles. Most of the weight should be on the balls of the feet, because this makes quick sudden movements and pivots necessary for good shots much easier. The upper arm should be close, but not flush, to your body. The forearm and racket should point forward, which requires that the elbow be bent.

A ready stance must be kept at all available times during play to ensure maximum control, power, and consistency. When the ready position is mastered, the necessary footwork can follow. Footwork is done primarily to position the player for an optimum shot.

The timing of the footwork is as important as the actual execution. If done too early, the opponent will notice and likely fire a shot where you weren't planning on going. Pay close

attention to the opponent when he/she is getting ready to hit; prepare yourself and don't start moving until he/she has started his/her stroke.

Follow the ball with your eyes and use the feet to move to the best shot making area relative to where the ball lands. Don't start the stroke until you have finished moving. After hitting the ball, get back into the ready stance immediately, in anticipation for a return that could go anywhere.

2.1.3 Service

Serve is the technique used to commence the game. There are 3 types of serves based on the direction of spin/rotation of the ball after stroked by the racket:

- a. Backspin service
- b. Topspin service
- c. Sidespin service

A. Backspin service

Backspin is where the bottom half of the ball is rotating away from the player, and is imparted by striking the base of the ball with a downward movement. Just like pushing or chopping, a backspin serve is executed with an open racket slicing the bottom of the ball.

B. Topspin service

Like driving, topspin serves can be done by hitting the top of the ball with a flat racket, or like looping, by grazing the top of the ball with a closed racket for more spin. As a result the ball rotates forward. Like the backspin stroke, however, the axis of spin remains roughly perpendicular to the trajectory of the ball.

C. Sidespin service

Simply hit the back of the ball in a left-to-right or right-to-left motion, as desired. To make the stroke easier try to holding the racket in front of you and brushing the bottom of the ball in a pendulum motion. As a result the ball rotates sideways. Unlike the two aforementioned techniques, sidespin causes the ball to spin on an axis which is vertical, rather than horizontal.

2.1.4 Strokes/Skills of Table Tennis

Stroke is any shot used by a player in a game. Table tennis strokes generally break down into *offensive* and *defensive* categories.

Offensive strokes

- Drive
- Loop
- Counter-drive
- Smash
- Flick

Defensive strokes

- Push
- Lob
- Block
- Chop

➤ *The Drive*

Drives, a light topspin stroke that produces a low ball trajectory, are the primary offensive strokes in table tennis. One employs drives to force errors and to set up winners. The mastery of both the forehand and backhand drives is important because it will give your opponent less option when using attacking strokes of his/her own. In executing this and all other offensive strokes, the usage of the entire body in unison is important for consistency and power. There are two types of drive stroke:

✓ *Speed Drive*

Racket is primarily perpendicular to the direction of the stroke and most of the energy applied to the ball results in *speed* rather than *spin*, creating a shot that does not arc much, but is fast enough that it can be difficult to return. A speed drive is used mostly for keeping the ball in play, applying pressure on the opponent, and potentially opening up an opportunity for a more powerful attack.

➤ *Loop*

The loop is essentially the reverse of the speed drive. The racket is much more parallel to the direction of the stroke ("closed") and the racket thus *grazes* the ball, resulting in a large amount of topspin. A good loop drive will arc quite a bit, and once striking the opponent's side of the table will jump forward.

A loop drive might not be as difficult to return as a speed drive; however, because of its topspin, it is more likely to rebound off the opponent's racket at a very high angle, setting up an easy smash on the follow-up. As the loop drive requires a lot of topspin, players generally use their entire body to generate the movement required. Variations in spin and speed add to the effectiveness of this shot.

➤ ***Counter-drive***

The counter-drive is usually a counterattack against drives, normally high loop drives. The racket is held closed and near to the ball, which is hit with a short movement "off the bounce" (immediately after hitting the table) so that the ball travels faster to the other side. A well-timed, accurate counter-drive can be as effective as a smash.

➤ ***Flick***

When a player tries to attack a ball that has not bounced beyond the edge of the table, the player does not have the room to wind up in a *backswing*. The ball *may still be attacked*, and the resulting shot is called a flick because the backswing is compressed into a quick wrist action. A flick is not a single stroke and can resemble either a drive or a loop in its characteristics. What identifies the stroke is the backswing is compressed into a short wrist flick.

➤ ***Smash***

The offensive trump card in table tennis is the smash. A player will typically execute a smash when his or her opponent has returned a ball that bounces too high or too close to the net. Large backswing and rapid acceleration imparting as much speed on the ball as possible. The goal of a smash is to get the ball to move so quickly that the opponent simply cannot return it.

Defensive strokes

➤ ***Push***

The push is usually used for keeping the point alive and creating offensive opportunities. A push resembles a tennis slice: the racket cuts underneath the ball, imparting backspin and causing the ball to float slowly to the other side of the table.

While not obvious, a push can be difficult to attack because the backspin on the ball causes it to drop toward the table upon striking the opponent's racket.

In order to attack a push, a player must usually loop the ball back over the net. Often, the best option for beginners is to simply push the ball back again, resulting in pushing rallies. Against good players, it may be the worst option because the opponent will counter with a loop, putting

the first player in a defensive position. Another response to pushing is flipping the ball when it is close to the net. Pushing can have advantages in some circumstances, such as when the opponent makes easy mistakes.

➤ **Chop**

A chop is the defensive, backspin counterpart to the offensive loop drive. It is essentially a bigger, heavier push, taken well back from the table. The racket face points primarily horizontally, perhaps a little bit upward, and the direction of the stroke is straight down.

The object of a defensive chop is to match the topspin of the opponent's shot with backspin. A good chop will float nearly horizontally back to the table, in some cases having so much backspin that the ball actually *rises*. Such a chop can be *extremely* difficult to return due to its enormous amount of backspin.

➤ **Block**

A block is executed by simply placing the racket in front of the ball right after the ball bounces; thus, the ball rebounds back toward the opponent with nearly as much energy as it came in with. This is not as easy as it sounds, because the ball's spin, speed, and location all influence the correct angle of a block. It is very possible for an opponent to execute a perfect loop, drive, or smash, only to have the blocked shot come back at him just as fast. Due to the power involved in offensive strokes, often an opponent simply cannot recover quickly enough, and will be unable to return the blocked shot. Blocks almost always produce the same spin as was received, usually topspin.

➤ **Lob**

The defensive lob is possibly the most impressive shot in the sport of table tennis, since it propels the ball about fifteen feet in the air only to land on the opponent's side of the table with great amounts of spin. To execute a *lob*, a defensive player first backs off the table 4–6 meters; then, the stroke itself consists of simply lifting the ball to an enormous height before it falls back to the opponent's side of the table.

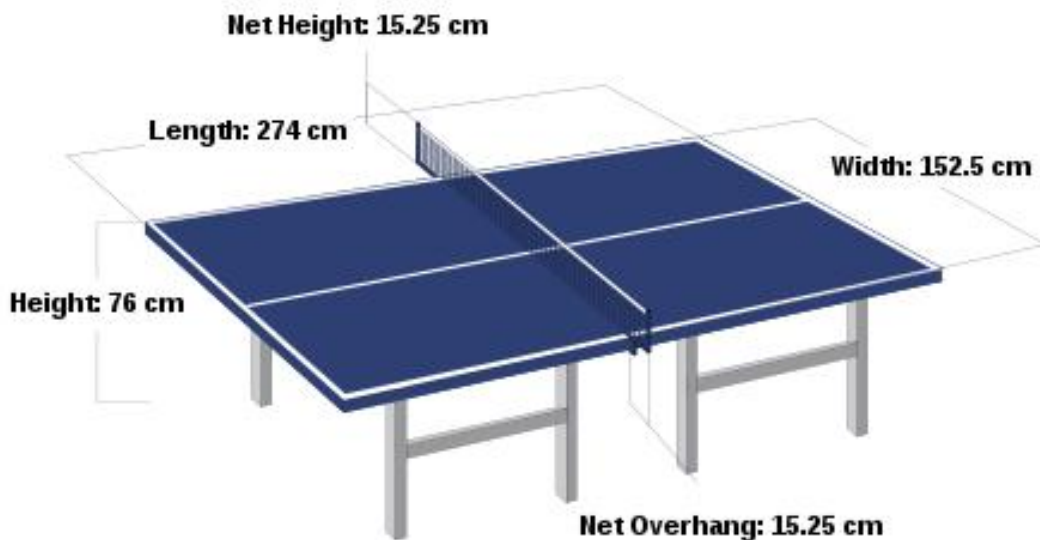
A lob is inherently a creative shot, and can have nearly any kind of spin. Top quality players use this to their advantage in order to control the spin of the ball. For instance, though the opponent may *smash* the ball hard and fast, a good defensive lob could be more difficult to return due to the unpredictability and heavy amounts of the spin on the ball.

2.2 Rules and Regulation of Table Tennis

2.2.1: Facilities and Equipment

1. The Table

- a. The table surface shall be rectangular, measuring 2.74 meters (9 feet) long by 1.525 meters (5 feet) wide. It shall be supported so that its upper surface, termed the “playing surface,” shall lie in a horizontal plane 76 centimeters (2 feet, 6 inches) above the floor.
- b. It shall be made of any material and shall yield a uniform bounce of no less than 22 centimeters (8.75 inches) and not more than 25 centimeters, (9.75 inches) when a standard ball is dropped from a height of 30.5 centimeters (12 inches) above its surface. A white line, two centimeters ($\frac{3}{4}$ inch) wide, shall border the table surface edges. The lines on the end are referred to as end lines, and the lines on the side are referred to as sidelines.
- c. For doubles, the playing surface shall be divided into halves by a white center line, three millimeters ($\frac{1}{8}$ inch) wide, running parallel with the sidelines. The center line shall be regarded as part of each right half-court.
- d. The playing surface shall include the top edges of the table, but not the sides of the tabletop below the edges.
- e. Diagram



2. The Net

- a. The playing surface shall be divided into two courts of equal size by a vertical net running parallel with the end lines.
- b. The net shall be suspended by a cord attached at each end to upright posts that are 15.25 centimeters (6 inches) high.
- c. The net, with its suspension, shall be 183 centimeters (6 feet) long, and its top, along its whole length, shall be 15.25 centimeters (6 inches) above the playing surface. The bottom of the net, along its whole length, shall be close to the playing surface, and the ends of the net shall be close to the supporting posts.
- d. The net assembly shall consist of the net, its suspension and the supporting posts, including the clamps attaching them to the table.

3. The Ball

- a. The ball shall be spherical with a diameter of 40 millimeters (1.57 inches).
- b. The ball shall weigh 2.7 grams.
- c. The ball shall be made of celluloid or similar plastic material and shall be white, or orange and matte.

4. The Racket

- a. The racket may be of any size, shape or weight.
- b. The blade shall be of wood, continuous of even thickness, flat and rigid.
- c. At least 85 percent of the blade, by thickness, shall be of natural wood.
- d. An adhesive layer within the blade may be reinforced with fibrous material, such as carbon fiber, glass fiber or compressed paper, but shall not be thicker than 7.5 percent of the total thickness or 0.35 millimeters, whichever is the smaller.
- e. A side of the blade used for striking the ball shall be covered with either ordinary pimped rubber, with pimples outwards, having a total thickness, including adhesive, of not more than 2 millimeters (1/16 inch) or sandwich rubber, with pimples inwards or outwards, having a total thickness, including adhesive, of not more than 4 millimeters.
- f. The covering material shall extend up to but not beyond the limits of the blade, except that the part nearest the handle and gripped by the fingers may be left uncovered or covered and should be considered part of the handle.

- g. The blade, any layer within the blade and any layer of covering material or adhesive on a side used for striking the ball shall be continuous and of even thickness.
- h. At the start of a match, and whenever the player changes his/her racket during a match, a player shall show his/her opponent and the umpire the racket he/she is about to use and shall allow them to examine it.
- i. The surface of the covering material on a side of the blade, or of a side of the blade if it is left uncovered, shall be matte, bright red on one side and black on the other; any trimming around the edge of the blade shall be matte and no part of it shall be white. Slight deviations from continuity of surface or uniformity of color due to accidental damage, wear or fading may be allowed provided that they do not significantly change the characteristics of the surface.

5. Definitions

- a. A rally is the period during which the ball is in play.
- b. A let is a rally of which the result is not scored.
- c. A point is a rally of which the result is scored.
- d. The racket hand is the hand carrying the racket.
- e. The free hand is the hand not carrying the racket.
- f. A player strikes the ball if he/she touches it with the racket held in the hand or with his/her racket-hand below the wrist.
- g. A player obstructs the ball if he/she, or anything he/she wears or carries, touches it in play when it has not passed over the playing surface or the player's end line, not having touched his/her court since last being struck by his opponent.
- h. The server is the player due to strike the ball first in a rally.
- i. The receiver is the player due to strike the ball second in a rally.
- j. The umpire is the person appointed to control a match.
- k. Anything that a player wears or carries includes anything that the player was wearing or carrying at the start of the rally.
- l. The ball shall be regarded as passing over or around the net assembly if it passes over, under or outside the projectile of the net assembly outside the table or if, in a return, it is struck after it has bounced back over or around the net.
- m. The end line shall be regarded as extending indefinitely in both directions.

2.2.2: Rules of competition

1. Basic Rules for Singles

A. A Game

A game shall be won by the player or pair first scoring 11 points unless both pairs have scored 10 points. In this case, the winner shall be the pair scoring two points more than the opposing pair.

B. A Match

A match shall consist of the best of any odd number of games.

C. The Choice of Ends and Service

2. The choice of ends and the right to serve or receive first in a match shall be decided by a coin toss.
3. The winner of the toss has the option to do one of the following:
 - a) Choose to serve or receive first, and the loser shall have the choice of ends.
 - b) Choose an end, and the loser shall have the right to choose to serve or receive first.
 - c) In doubles, the pair who has the right to serve first in the game shall decide which partner shall do so.
 - i) In the first game of a match, the opposing pair shall then decide which partner will receive first.
 - ii) In subsequent games of a match, the serving pair will choose its first server, and the first receiver will then be established automatically to correspond to the first server.

D. The Change of Ends

The player or pair starting at one end in a game shall start at the other end in the next game of the match. In the last possible game of the match, the players or pairs shall change ends when first one player or pair scores five points.

E. The Order of Play

- 1) In singles, the server shall first make a good service, the receiver shall then make a good return and, thereafter, service and receiver alternately shall each make a good return.
- 2) In doubles, the server shall first make a good service, the receiver shall then make a good return, the partner of the server shall then make a good return, the partner of the receiver shall then make a good return and, thereafter, each player alternately in that sequence shall make a good return.

F. The Change of Service

- 1) After each two points have been scored, the receiving player or pair shall become the serving player or pair and so on until the end of the game, unless both players or pairs score 10 points or the expedite system is in operation (when the sequence of serving and receiving shall be the same, but each player shall serve for only one point in turn).

2. Doubles

- a) The first two services shall be delivered by the selected partner of the pair which has the right to serve and shall be received by the appropriate partner of the opposing pair.
 - b) The second two services shall be delivered by the receiver of the first two services and shall be received by the partner of the first server.
 - c) The third two services shall be delivered by the partner of the first server and shall be received by the partner of the first receiver.
 - d) The fourth two services shall be delivered by the partner of the first receiver and shall be received by the first server.
 - e) The fifth two services shall be delivered and received as the first two services, and so on, until the end of the game or if the score is tied at 20 points.
 - f) In each game of a doubles match, the initial order of receiving shall be opposite to that in the immediately preceding game.
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- ❖ When the score is tied at 10 points, the sequence of serving and receiving shall be the same, but each player shall deliver only one service in turn until the end of the game.
 - ❖ The player or pair who serves first in a game shall receive first in the immediately subsequent game and so on, until the end of the match.

G. Out of Order of Serving, Receiving or Ends

- 1) If by mistake, the players have not changed ends when ends should have been changed, play shall be interrupted as soon as the error is discovered and the players shall change ends.
- 2) If by mistake a player serves or receives out of turn, play shall be interrupted and shall continue with that player serving or receiving who according to the sequence established at the beginning of the match should be server or receiver.
- 3) In any circumstances, all points scored before the discovery of an error shall be considered valid.

H. A Good Service

- 1) Service shall begin with the ball resting on the palm of the free hand, which shall be stationary, open and flat, with the fingers together and the thumb free.

- 2) The free hand and the racket shall be above the level of the playing surface from the last moment at which the ball is stationary on the palm of the free hand until the ball is struck in service.
- 3) The server shall then project the ball upwards, by hand only and without imparting spin, so that it rises near vertically from the palm of the hand at least 16 centimeters (6 inches).
- 4) As the ball descends from the height of its trajectory, the server shall strike it so that it touches first his/her own court then passes directly over the net or its supports and subsequently touches the receiver's court.
- 5) In doubles, the points of contact of the ball with the playing surface shall touch successively the right half court of server and receiver.
- 6) If, in attempting to serve, a player fails to strike the ball while it is in play, he/she shall lose a point.
- 7) When the ball is struck in service, it shall be behind the end line of the server's court or an imaginary extension thereof, but not farther back than the part of the server's body, other than his/her arm, head or leg, which is farthest from the net.
- 8) Where there is a clear failure to comply with the requirements for a good service, no warning should be given, and a point should be awarded to the opponent.
 - a) Except when an assistant umpire has been appointed, the umpire may, on the first occasion in a match at which he/she has a doubt about the correctness of a player's service, interrupt play and warn the server without awarding a point. On any subsequent occasion in the same match in which the same player's service action is of doubtful correctness, for the same or for any other reason, the player shall not be given the benefit of the doubt and shall lose a point.
 - b) Strict observance of the prescribed method of service may be waived (when the umpire is notified before play begins) if compliance is prevented by a physical disability.

I. A Good Return

- 1) The ball, having been served or returned in play, shall be struck so that it passes over or around the net assembly and touches the opponent's court either directly or after touching the net assembly.
- 2) If the ball, having been served or returned in play, returns with its own impetus over the net, it may be struck so that it directly touches the opponent's court.

J. Ball in Play

The ball shall be in play from the last moment at which it is stationary before being projected in service until it touches anything other than the playing surface, the net assembly, the racket held in the hand or the racket hand below the wrist, or if the rally is otherwise decided as a let or a point.

K. A Let

- 1) A rally is a let in the following instances:
 - a) If the ball served, in passing over or around the net, touches it or its supports, provided the service is otherwise good or is obstructed by the receiver or his partner.
 - b) If the service is delivered when, in the opinion of the umpire, the receiving player or pair is not ready, provided that neither the receiver nor his/her partner attempts to strike the ball.
 - c) If, in the opinion of the umpire, failure to make a good service or a good return or otherwise to comply with the rules is due to a disturbance outside the control of the player.
 - d) If the rally is interrupted for correction of an error in playing order or ends.
 - e) If the service is interrupted for warning a player for a service of doubtful correctness.
 - f) If the conditions of play are disturbed in a way which, in the opinion of the umpire, is likely to affect the outcome of the rally.

L. Loss of a Point

- 1) Unless the rally is a let, a player will lose a point in the following situations:
 - a) If the player fails to make a good service.
 - b) If the player fails to make a good return.
 - c) If the player obstructs the ball.
 - d) If the player strikes the ball with a side of the racket blade having an illegal surface.
 - e) If the player, or anything he/she wears or carries, moves the playing surface while the ball is in play.
 - f) If the player's free hand touches the playing surface while the ball is in play.
 - g) If the player or anything he/she wears or carries touches the net assembly while the ball is in play.
 - h) In doubles, if the player strikes the ball out of proper sequence except where there has been a genuine error in playing order.

3. Modifications for Wheelchair Competition

- a. All competitors shall compete in wheelchairs.
 - 1) A cushion of any size and make, of any combination of foam rubber, may be used.
 - 2) The wheelchair is not required to have a back support.
- b. The table shall not have any physical barrier that can in any way hinder the normal and legal movement of the competitor's wheelchair.
- c. In service, the receiver is required to make a good return. However, if the receiver strikes the ball before it crosses a sideline or takes a second bounce on his side of the playing surface, the service shall be considered good, and no let shall be called.
 - 1) In service, wheelchair players are not required to project the ball upward from the palm of the free hand. Players in these classes may hold the ball and project it

upward in any manner. Regardless of the method, no spin may be imparted to the ball. Responsibility still rests with the server to serve so that the legality of the serve can be checked by the umpire

- d. Wheelchair players may touch the playing surface with their free hand during play without losing the point; however, they may not use the free hand on the table for support while striking the ball, provided the playing surface has not been moved.
- e. The competitor's feet or footrests may not touch the floor during play.
- f. Competitors may not rise noticeably off their cushions during play.
- g. In doubles service, the ball may leave by the sideline of the receiver's right half court. The server shall first make a good service, and the receiver shall make a good return, and thereafter either player of a pair may return the ball. A player's wheelchair shall not protrude beyond an imaginary extension of the center line of the table. If it does, the umpire shall award a point to the opposing pair.

Chapter Three: Badminton Game

3.1 Basic Techniques and Tactics of Badminton

3.1.1 Grips

There are two types of grips in badminton. These are:

- a. Forehand grip
- b. Backhand grip

a. Forehand grip

To adopt the forehand grip you should 'shake hands' with your racket. When holding the racket out in front of you; the racket should be parallel with the floor with its head angled vertically. The 'V' produced between your finger and thumb should be on top of the racket handle. The grip should be relaxed, the fingers will tighten on the handle just before impact with the shuttle – the greater the power needed the tighter the grip.

b. Backhand grip

To use the backhand grip your thumb must sit on the flat part of the racket handle (you must be able to see the strings). The grip must be loose to enable the thumb to guide the racket through the shot. The racket should be held in your fingers, not your palm. Your fingers and thumb should be used to control the racket and power.

3.1.2 Serving & Returning

Service: There are two types of service in badminton:

- High service
- Short service

➤ High service

It is the primary service in single's game and forehand grip to be used to execute it. Its aim is to get the shuttle as high and as far back in the court as possible.

➤ Short service

It is better used during double's game. The aim of this serve is to serve the shuttle as low to the net and as close to the short single line as possible. You can use either a forehand or backhand grip, but the easiest to learn for beginners and the most consistent is the backhand serve.

❖ Return of service

In singles; players should stand in the middle of the area to be served into. In doubles, the player can stand a little closer towards the service line. The player must then be ready to move fast towards the shuttle as soon as the serve is hit. The ideal position is to stand with your legs positioned with your non-racket leg in front (left leg for right-handers). Have your knees bent so you are ready to move with your racket up so you can react quicker to the serve.

❖ Positioning for Serving / Returning in Doubles & Mixed

In men's or ladies doubles, the server will stand close to the service line and their partner should stand in the middle of the court behind the server so they are ready to cover the back of the court. Also when the pair is receiving, the partner should stand behind the receiver in the middle of the court

In Mixed doubles it's normal for the lady to stand in front of her partner on the service line when he is serving. She is then able to cover the front more effectively. When the lady is serving the man can stand the same as in doubles – behind the server in the middle of the court.

Receiving for the lady is the same positioning for doubles, but when the man is receiving the lady can stand just behind or alongside him so that both players aren't standing at the front of the court and they are ready to cover the entire court. Players must always have their knees bent and ready to move

3.1.3 Shots/strokes

1. Overhead shots
 - ✓ Clear shot
 - ✓ Drop shot
 - ✓ Smash
2. Front of court shots
 - ✓ Net shots
 - ✓ Net lifts
3. Defense/Block shot
4. Drives

1. Overhead shots

✓ Clear shot

The clear shot is one of overhead strokes played with the forehand grip. The aim to produce these shots is so that the opponent cannot anticipate which shot is going to be played until the last split second.

✓ Drop shot

The aim of the drop shot is to bring the opponent in close to the net so they have to lunge down low to retrieve the shuttle.

✓ Smash

The Smash is the most powerful and dynamic shot. It is an attacking shot that is used a lot to put the opponent under pressure and to win rallies.

2. Front of court shots

✓ Net shots

The aim of a net shot is to play the shuttle as close as possible to the net so that it is difficult to return. It is not so important to keep the shuttle flat in its trajectory over the net – it's more important for it to be close to the net.

✓ Net lift

The net lift is played with either the forehand or the backhand and aims to land the shuttle in the tramlines at the back of the court.

3. Defensive / block shot

This is used more in doubles and mixed doubles. Backhand grip to be used with the racket head pointing at 11 o'clock position (or 1 o'clock for left handers).

4. Drives

A drive shot is a hard flat shot from half court to half court. This is a good shot for beginners to start with to practice contact with the shuttle.

3.2. Rule and Regulation of Badminton

3.2.1. Definitions

- **Player:** Any person playing Badminton.
- **Match:** The basic contest in Badminton between opposing sides each of one or two players.
- **Singles:** A match where there is one player on each of the opposing sides.
- **Doubles:** A match where there are two players on each of the opposing sides.
- **Serving side:** The side having the right to serve.
- **Receiving side:** The side opposing the serving side.
- **Rally:** A sequence of one or more strokes starting with the service, until the shuttle ceases to be in play.
- **Stroke:** A movement of the player's racket with an intention to hit the shuttle.

1. Court and court equipment

-
- Diagram of a tennis court showing dimensions and line markings. The court is 11.40m wide and 23.50m long. It includes a net, service lines, center lines, and various service courts for singles and doubles play. Dimensions for the court, net, and lines are provided in meters.
- Dimensions:**
- Overall length: 23.50m
 - Overall width: 11.40m
 - Net height: 1.00m
 - Net width: 1.00m
 - Net post height: 1.00m
 - Net post width: 1.00m
 - Net post depth: 1.00m
 - Net post diameter: 1.00m
 - Net post base: 1.00m
 - Net post top: 1.00m
 - Net post middle: 1.00m
 - Net post bottom: 1.00m
 - Net post side: 1.00m
 - Net post front: 1.00m
 - Net post back: 1.00m
 - Net post left: 1.00m
 - Net post right: 1.00m
 - Net post top-left: 1.00m
 - Net post top-right: 1.00m
 - Net post bottom-left: 1.00m
 - Net post bottom-right: 1.00m
 - Net post middle-left: 1.00m
 - Net post middle-right: 1.00m
 - Net post side-left: 1.00m
 - Net post side-right: 1.00m
 - Net post front-left: 1.00m
 - Net post front-right: 1.00m
 - Net post back-left: 1.00m
 - Net post back-right: 1.00m
- Line Markings:**
- Net
 - Service Line
 - Center Line
 - Short Service Line
 - Long Service Line
 - Back Boundary Line
 - Front Boundary Line
 - Side Line
 - Center Line
 - Service Line
 - Short Service Line
 - Long Service Line
 - Back Boundary Line
 - Front Boundary Line
 - Side Line
- Labels:**
- Net
 - Service Line
 - Center Line
 - Short Service Line
 - Long Service Line
 - Back Boundary Line
 - Front Boundary Line
 - Side Line
 - Center Line
 - Service Line
 - Short Service Line
 - Long Service Line
 - Back Boundary Line
 - Front Boundary Line
 - Side Line

Note: (1) Diagonal length of full court = 14.723m

(2) Court as shown above can be used for both singles and doubles play

2. Shuttle

The shuttle shall be made of natural or synthetic materials. From whatever material the shuttle is made, the flight characteristics generally shall be similar to those produced by a natural feathered shuttle with a cork base covered by a thin layer of leather.

2.2 Feathered Shuttle

- 2.2.1 The shuttle shall have 16 feathers fixed in the base.
- 2.2.2 The feathers shall have a uniform length between 62mm to 70mm when measured from the tip to the top of the base.
- 2.2.3 The tips of the feathers shall lie on a circle with a diameter from 58 mm to 68 mm.
- 2.2.4 The feathers shall be fastened firmly with thread or other suitable material.
- 2.2.5 The base shall be 25 mm to 28 mm in diameter and rounded on the bottom.
- 2.2.6 The shuttle shall weigh from 4.74 to 5.50 grams.

2.3 Non-Feathered Shuttle

- 2.3.1 The skirt, or simulation of feathers in synthetic materials, shall replace natural feathers.
- 2.3.2 The base shall be as described in Law 2.2.5.
- 2.3.3 Measurements and weight shall be as in Laws 2.2.2, 2.2.3 and 2.2.6. However, because of the difference in the specific gravity and other properties of synthetic materials in comparison with feathers, a variation of up to 10 percent shall be acceptable.
- 2.3.4 Subject to there being no variation in the *general design, speed and flight of the shuttle*, modifications in the above specifications may be made with the approval of the Member Association concerned, in places where atmospheric conditions due to either altitude or climate make the standard shuttle unsuitable.

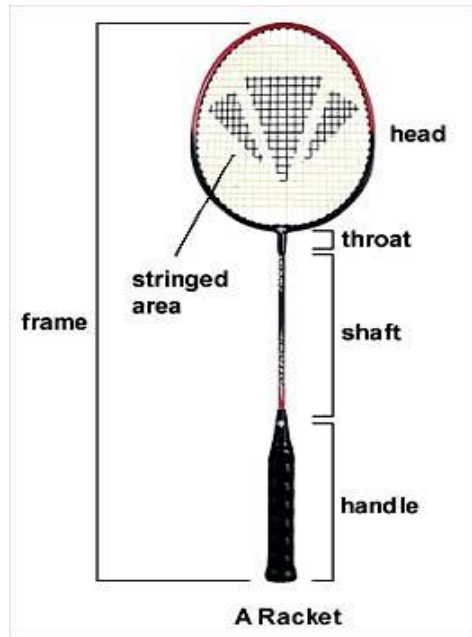
3 Testing a shuttle for speed

- 3.1 To test a shuttle, a player shall use a full underhand stroke which makes contact with the shuttle over the back boundary line. The shuttle shall be hit at an upward angle and in a direction parallel to the side lines.
- 3.2 A shuttle of correct speed will land not less than 53cm and not more than 99cm short of the other back boundary line.

4 Racket

4.1 The racket shall be a frame not exceeding 68cm in overall length and 23cm in overall width consisting of the main parts described in Laws 4.1.1 to 4.1.5

4.1.1 The handle is the part of the racket intended to be gripped by a player.



4.1.2 The stringed area is the part of the racket with which it is intended that a player hits the shuttle.

4.1.3 The head bounds the stringed area.

4.1.4 The shaft connects the handle to the head (subject to Law 4.1.5).

4.1.5 The throat (if present) connects the shaft to the head.

4.2 The stringed area:

4.2.1 Shall be flat and consist of a pattern of crossed strings either alternately interlaced or bonded where they cross. The stringing pattern shall be generally uniform and, in particular, not less dense in the center than in any other area; and

4.2.2 Shall not exceed 28cm in overall length and 22cm in overall width. However, the strings may extend into an area which otherwise would be the throat, provided that:

4.2.2.1 The width of the extended stringed area does not exceed 35 mm; and

4.2.2.2 The overall length of the stringed area does not then exceed 33cm.

4.3 The racket:

4.3.1 shall be free of attached objects and protrusions, other than those used solely and specifically to limit or prevent wear and tear, or vibration, or to distribute weight, or to secure the handle by cord to the player's hand, and which are reasonable in size and placement for such purposes; and

4.3.2 Shall be free of any device that makes it possible for a player to change materially the shape of the racket.

5 Equipment compliance

The International Badminton Federation shall rule on any question of whether any racket, shuttle or equipment or any prototype used in the playing of Badminton complies with the specifications. Such ruling may be undertaken on the Federation's initiative or on application by any party with a bona fide interest, including any player, technical official, equipment manufacturer or Member Association or member thereof.

6 Toss

6.1 Before play commences, a toss shall be conducted and the side winning the toss shall exercise the choice in either Law 6.1.1 or 6.1.2:

6.1.1 To serve or receive first;

6.1.2 To start play at one end of the court or the other.

6.2 The side losing the toss shall then exercise the remaining choice.

7 Scoring system

7.1 A match shall consist of the best of three games, unless otherwise arranged.

7.2 A game shall be won by the side which first scores 21 points, except as provided in Law 7.4 and 7.5.

7.3 The side winning a rally shall add a point to its score. A side shall win a rally, if the opposing side commits a "fault" or the shuttle ceases to be in play because it touches the surface of the court inside the opponent's court.

7.4 If the score becomes 20-all, the side which gains a two point lead first, shall win that game.

7.5 If the score becomes 29-all, the side scoring the 30th point shall win that game.

7.6 The side winning a game shall serve first in the next game.

8 Change of ends

8.1 Players shall change ends:

8.1.1 at the end of the first game;

8.1.2 at the end of the second game, if there is to be a third game; and

8.1.3 in the third game when a side first scores 11 points.

8.2 If the ends are not changed as indicated in Law 8.1, it shall be done so as soon as the mistake is discovered and when the shuttle is not in play. The existing score shall stand.

9 Service

9.1 In a correct service:

9.1.1 Neither side shall cause undue delay to the delivery of the service once the server and the receiver are ready for the service. On completion of the backward movement of server's racket head, any delay in the start of the service (Law 9.2), shall be considered to be an undue delay;

9.1.2 the server and the receiver shall stand within diagonally opposite service courts without touching the boundary lines of these service courts;

9.1.3 some part of both feet of the server and the receiver shall remain in contact with the surface of the court in a stationary position from the start of the service (Law 9.2) until the service is delivered (Law 9.3);

9.1.4 the server's racket shall initially hit the base of the shuttle;

- 9.1.5 the whole shuttle shall be below the server's waist at the instant of being hit by the server's racket. The waist shall be considered to be an imaginary line round the body, level with the lowest part of the server's bottom rib;
- 9.1.6 the shaft of the server's racket at the instant of hitting the shuttle shall be pointing in a downward direction;
- 9.1.7 the movement of the server's racket shall continue forwards from the start of the service (Law 9.2) until the service is delivered (Law 9.3);
- 9.1.8 the flight of the shuttle shall be upwards from the server's racket to pass over the net so that, if not intercepted, it shall land in the receiver's service court (i.e. on or within the boundary lines); and
- 9.1.9 in attempting to serve, the server shall not miss the shuttle.
- 9.2 Once the players are ready for the service, the first forward movement of the server's racket head shall be the start of the service.
- 9.3 Once started (Law 9.2), the service is delivered when the shuttle is hit by the server's racket or, in attempting to serve, the server misses the shuttle.
- 9.4 The server shall not serve before the receiver is ready. However, the receiver shall be considered to have been ready if a return of the service is attempted.
- 9.5 In doubles, during the delivery of service (Law 9.2, 9.3); the partners may take up any positions within their respective courts, which do not insight the opposing server or receiver.

10 Singles

10.1 Serving and receiving courts

- 10.1.1 The players shall serve from, and receive in, their respective right service courts when the server has not scored or has scored an even number of points in that game.
- 10.1.2 The players shall serve from, and receive in, their respective left service courts when the server has scored an odd number of points in that game.

10.2 Order of play and position on court.

In a rally, the shuttle may be hit by the server and the receiver alternately, from any position on that player's side of the net, until the shuttle ceases to be in play (Law 15).

10.3 Scoring and serving

10.3.1 If the server wins a rally (Law 7.3), the server shall score a point. The server shall then serve again from the alternate service court.

10.3.2 If the receiver wins a rally (Law 7.3), the receiver shall score a point. The receiver shall then become the new server.

11 Doubles

11.1 Serving and receiving courts

11.1.1 A player of the serving side shall serve from the right service court when the serving side has not scored or has scored an even number of points in that game.

11.1.2 A player of the serving side shall serve from the left service court when the serving side has scored an odd number of points in that game.

11.1.3 The player of the receiving side who served last shall stay in the same service court from where he served last. The reverse pattern shall apply to the receiver's partner.

11.1.4 The player of the receiving side standing in the diagonally opposite service court to the server shall be the receiver.

11.1.5 The players shall not change their respective service courts until they win a point when their side is serving.

11.1.6 Service in any turn of serving shall be delivered from the service court corresponding to the serving side's score, except as provided in Law 12.

11.2 Orders of play and position on court

After the service is returned in a rally, the shuttle may be hit by either player of the serving side and either player of the receiving side alternately from any position on that player's side of the net until the shuttle ceases to be in play (Law 15).

11.3 Scoring and serving

11.3.1 If the serving side wins a rally (Law 7.3), the serving side shall score a point. The server shall then serve again from the alternate service court.

11.3.2 If the receiving side wins a rally (Law 7.3), the receiving side shall score a point. The receiving side shall then become the new serving side.

11.4 Sequence of serving

In any game, the right to serve shall pass consecutively:

11.4.1 from the initial server who started the game from the right service court

11.4.2 to the partner of the initial receiver.

11.4.3 to the partner of the initial server

11.4.4 to the initial receiver,

11.4.5 to the initial server and so on.

11.5 No player shall serve or receive out of turn, or receive two consecutive services in the same game, except as provided in Law 12.

11.6 Either player of the winning side may serve first in the next game, and either player of the losing side may receive first in the next game.

12 Service court errors

12.1 A service court error has been made when a player:

12.1.1 Has served or received out of turn; or

12.1.2 Has served or received from the wrong service court;

12.2 If a service court error is discovered, the error shall be corrected and the existing score shall stand.

13 Faults

It shall be a "fault":

13.1 If a service is not correct (Law 9.1);

13.2 if, in service, the shuttle:

13.2.1 Is caught on the net and remains suspended on its top;

13.2.2 after passing over the net, is caught in the net; or

13.2.3 is hit by the receiver's partner;

13.3 If in play, the shuttle:

13.3.1 Lands outside the boundaries of the court (i.e. not on or within the boundary lines);

13.3.2 passes through or under the net;

13.3.3 fails to pass over the net;

13.3.4 touches the ceiling or side walls;

13.3.5 touches the person or dress of a player;

13.3.6 touches any other object or person outside the court;

13.3.7 is caught and held on the racket and then slung during the execution of a stroke;

13.3.8 is hit twice in succession by the same player. However, a shuttle hitting the head and the stringed area of the racket in one stroke shall not be a "fault";

13.3.9 is hit by a player and the player's partner successively; or

13.3.10 touches a player's racket and does not travel towards the opponent's court;

13.4 if, in play, a player:

13.4.1 touches the net or its supports with racket, person or dress;

13.4.2 invades an opponent's court over the net with racket or person except that the striker may follow the shuttle over the net with the racket in the course of a stroke after the initial point of contact with the shuttle is on the striker's side of the net;

13.4.3 invades an opponent's court under the net with racket or person such that an opponent is obstructed or distracted; or

13.4.4 obstructs an opponent, i.e. prevents an opponent from making a legal stroke where the shuttle is followed over the net;

13.4.5 deliberately distracts an opponent by any action such as shouting or making gestures;

13.5 if a player is guilty of flagrant, repeated or persistent offences under Law 16;

14 Lets

14.1 "Let" shall be called by the umpire, or by a player (if there is no umpire), to halt play.

14.2 It shall be a "let", if:

14.2.1 the server serves before the receiver is ready (Law 9.4);

14.2.2 during service, the receiver and the server are both faulted;

14.2.3 after the service is returned, the shuttle is:

14.2.3.1 caught on the net and remains suspended on its top, or

14.2.3.2 after passing over the net is caught in the net;

14.2.4 during play, the shuttle disintegrates and the base completely separates from the rest of the shuttle;

14.2.5 in the opinion of the umpire, play is disrupted or a player of the opposing side is distracted by a coach;

14.2.6 a line judge is unsighted and the umpire is unable to make a decision; or

14.2.7 any unforeseen or accidental situation has occurred.

14.3 When a "let" occurs, play since the last service shall not count and the player who served last shall serve again,.

15 Shuttle not in play

A shuttle is not in play when:

15.1 it strikes the net or post and starts to fall towards the surface of the court on the striker's side of the net;

15.2 it hits the surface of the court; or

15.3 a "fault" or a "let" has occurred.

16 Continuous play, misconduct & penalties

16.1 Play shall be continuous from the first service until the match is concluded, except as allowed in Laws 16.2 and 16.3.

16.2 Intervals:

16.2.1 Not exceeding 60 seconds during each game when the leading score reaches 11 points; and

16.2.2 Not exceeding 120 seconds between the first and second game, and between the second and third game shall be allowed in all matches.

16.3 Suspension of play

16.3.1 When necessitated by circumstances not within the control of the players, the umpire may suspend play for such a period as the umpire may consider necessary.

16.3.2 Under special circumstances the Referee may instruct the umpire to suspend play.

16.3.3 If play is suspended, the existing score shall stand and play shall be resumed from that point.

16.4 Delay in play

16.4.1 Under no circumstances shall play be delayed to enable a player to recover strength or wind or to receive advice.

16.4.2 The umpire shall be the sole judge of any delay in play.

16.5 Advice and leaving the court

16.5.1 Only when the shuttle is not in play (Law 15), shall a player be permitted to receive advice during a match.

16.5.2 No player shall leave the court during a match without the umpire's permission, except during the intervals as described in Law 16.2.

16.6 A player shall not:

- 16.6.1 Deliberately cause delay in, or suspension of, play;
- 16.6.2 Deliberately modify or damage the shuttle in order to change its speed or its flight;
- 16.6.3 Behave in an offensive manner; or
- 16.6.4 be guilty of misconduct not otherwise covered by the Laws of Badminton.

16.7 Administration of breach

- 16.7.1 The umpire shall administer any breach of Law 16.4, 16.5 or 16.6 by:
 - 16.7.1.1 Issuing a warning to the offending side;
 - 16.7.1.2 Faulting the offending side, if previously warned. Two such faults by a side shall be considered to be a persistent offence; or
- 16.7.2 In cases of flagrant offence, persistent offences or breach of Law 16.2, the umpire shall fault the offending side and report the offending side immediately to the Referee, who shall have the power to disqualify the offending side from the match.

17 Officials and appeals

- 17.1 The Referee shall be in overall charge of the tournament or event of which a match forms part.
- 17.2 The umpire, where appointed, shall be in charge of the match, the court and its immediate surrounds. The umpire shall report to the Referee.
- 17.3 The service judge shall call service faults made by the server should they occur (Law 9.1.2 to 9.1.8).
- 17.4 A line judge shall indicate whether a shuttle landed "in" or "out" on the line(s) assigned.
- 17.5 An official's decision shall be final on all points of fact for which that official is responsible except that if, in the opinion of the umpire, it is beyond reasonable doubt that a line judge has clearly made a wrong call, the umpire shall overrule the decision of the line judge.
- 17.6 An umpire shall:

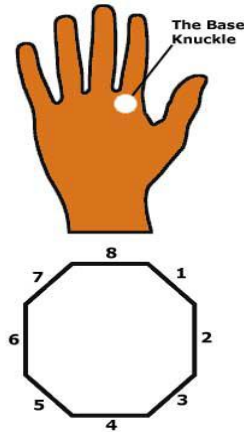
- 17.6.1 Uphold and enforce the Laws of Badminton and, especially, call a "fault" or a "let" should either occur;
- 17.6.2 Give a decision on any appeal regarding a point of dispute, if made before the next service is delivered;
- 17.6.3 Ensure players and spectators are kept informed of the progress of the match;
- 17.6.4 Appoint or replace line judges or a service judge in consultation with the Referee;
- 17.6.5 Where another court official is not appointed, arrange for that official's duties to be carried out;
- 17.6.6 Where an appointed official is unsighted, carry out that official's duties or play a "let";
- 17.6.7 Record and report to the Referee all matters relating to Law 16

Chapter Four: Ground Tennis Game

4.1 Basic Techniques and Tactics of Ground Tennis

4.1.1. Grip

In order to understand the grips, it is important to know that the handle of tennis racquet always consists of 8 sides called *bevels*. We can number the bevels from 1 to 8 as follows:



If the edge of the racquet is *perpendicular* to the ground, the bevel facing up is #8. The one next to it rotating your hand clockwise is #1 if you are right-handed and counter-clockwise if you are left-handed, and so on.

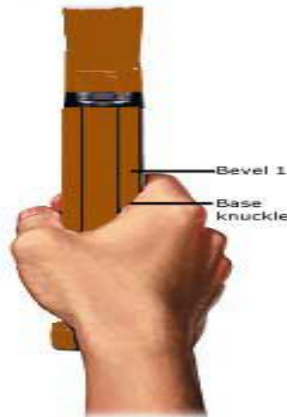
The key differences between grips are the different angles they create between the angle of your palm and the angle of your racquet face. You are used to sensing the direction your palm is facing, so your palm makes the most intuitive basis for sensing the direction your racquet is facing.

Here are the lists of most commonly used grips in tennis:

1. Continental grip
2. Eastern Forehand grip
3. Semi-Western forehand grip
4. Western forehand grip
5. Extreme Eastern Backhand Grip
6. Eastern Backhand grip
7. Two-Handed Backhand grip

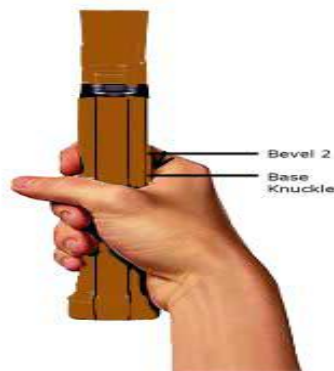
Continental Grip

The Continental grip is nothing but the shake hand grip or chopper grip. This grip was used by most of the players during the early incubation of tennis. It is obtained when you hold the racket as an axe for chopping, hence chopper grip. For perfect continental grip, place your hand in such a way that the base knuckle of the index finger is right on the first bevel. Lefties put the knuckle on bevel No. 4. This grip is used primarily for serves, volleys, overheads, slices, quick returns and defensive shots. (See the following diagram).



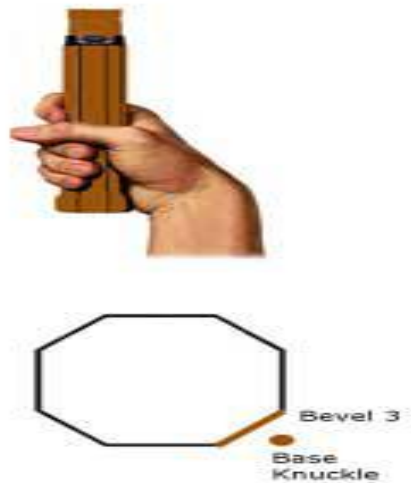
Eastern Forehand Grip

For Eastern Forehand grip you need to place your hand in such a way that the base knuckle of the index finger is right on the second bevel. The easiest way to obtain this grip is to place the hand flat against the strings and slide down to the grip and then hold the racquet firmly like shaking hands with it. The more technical way is to hold the racquet in a Continental grip and then turn your hand clockwise (counterclockwise for lefties), so that the base knuckle of your index finger slides over one bevel. This grip allows for more topspin on the forehand while keeping control. (See the following diagram).



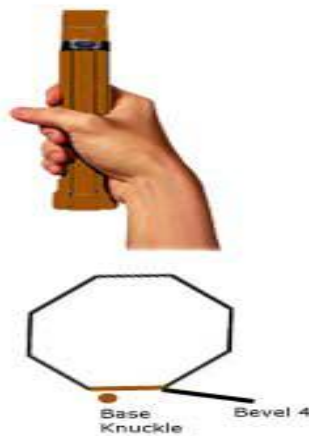
Semi-Western Forehand Grip

The Semi-Western forehand grip is obtained by placing the hand such that the base knuckle of the index finger is right on the third bevel. This grip is mostly used by players who play most of the time from the baseline and prefer whacking a winner from the back of the court to the points. It also allows for pace and generates topspin. (See the following diagram).



Western Forehand Grip

This grip is obtained when you place the hand in such a way that the base knuckle of the index finger is right on the fourth bevel or after taking the western grip, the hand should move further clockwise with the thumb overlapping the middle finger. This grip is mostly practiced by players who practice strokes with heavy topspin on their balls. But, it forces the wrist in to a strange and possibly uncomfortable twist. (See the diagram blow).



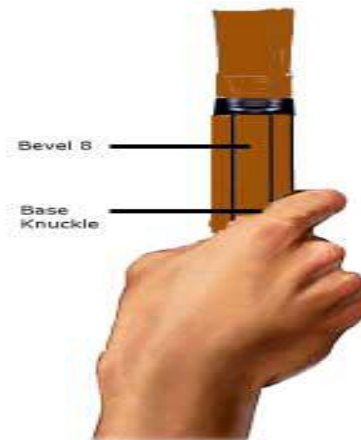
Extreme Eastern Backhand Grip

This grip is obtained when placing the hand such that the base knuckle of the index finger is right on the seventh bevel. It's an advanced grip that only stronger and more accomplished players tend to use. (See the diagram blow).



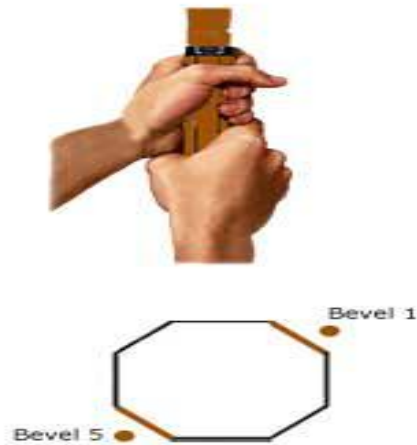
Eastern Backhand Grip

Take a continental grip on the racquet and shift the hand in an anti-clockwise (clockwise for lefties) direction in such a way that the knuckle of the index finger gets placed at bevel 8. This is one of the easiest and versatile backhand grips in the game. It is a good all-round grip used to generate topspin. It also provides stability for the wrist. (See the following diagram).



Two Handed Backhand Grip

It is obtained by holding the racquet with right hand using regular Continental grip, then placing the left hand above holding it in a left-handed Semi-Western Forehand grip (fifth bevel). (See the diagram blow).



4.1.2 Shots/strokes of tennis

Tennis shots are named for when they are struck (in the case of the serve) or the manner in which they are struck. There are seven basic shots in the game of tennis:

1. Service
2. Forehand
3. Backhand
4. Volley
5. Slice
6. Smash
7. Lob
8. Drop shot

❖ Service

A serve in tennis is a shot to begin the point. The server may employ different types of serve: *a flat*, *a top-spin*, kick or *a slice* serve. But, the most common serve used is an *overhead serve*. It is initiated by tossing the ball into the air over the server's head and hitting it when the arm is fully stretched out into the diagonally opposite service box without touching the net.

A severely sliced serve is sometimes called a *sidespin*. Beginners are content to use the serve simply to initiate the point; advanced players often try to hit a winning shot with their serve. A winning serve that is not touched by the opponent is called an *ace*.

❖ Forehand stroke

The *forehand* is struck from the dominant side of the body by swinging the racquet in the direction of where the player wants to place the shot. It is called a forehand because the racquet is held in such a way that if one is to strike the ball with the palm of his hand. This is the opposite side from a *backhand*. It is considered the easiest shot to master, perhaps because it is the most natural stroke. Beginners and advanced players often have better forehands than any other shots and use it as a weapon.

There are various *grips* for executing the forehand stroke. The most important ones are the *Continental*, the *Eastern*, and the *Western*. No matter which grip is used, most forehands are generally executed with one hand holding the racquet, but there have been fine players with two-handed forehands.

❖ Backhand stroke

The *backhand* is struck from the non-dominant side of the body by bringing the racquet across the body (showing the *back* of your hand to the opponent) and swinging the racquet away from one's body in the direction of where the player wants the ball to go. It is generally considered more difficult to master than the forehand.

It can be executed with either one or both hands. It is performed with one hand, using either an *eastern* or a *continental* grip. The Two handed backhand was used more often since it allowed easy access to power and control. Two hands give the player more power so it provides the player with an advantage on power-focused shots. However, one hand is useful in that it can generate a slice shot, applying backspin on the ball to produce a low trajectory bounce.

❖ Volley

A volley in tennis is a shot in which the ball is struck before it bounces on the ground. Generally a player hits a volley while standing near the net, although it can be executed farther back, in the middle of the tennis court or even near the baseline.

The primary objective of the volley is to go on the offensive and cut the amount of time for the opponent to react. Another advantage is that a player eliminates any possibility of a bad bounce from an uneven surface such as on some *grass* and *clay courts*.

Also, if near the net, a volleyer has a wider choice of angles to hit into the opponent's court. However, quick reflexes and *hand-eye coordination* are required to execute this shot. The primary means of countering a volley are the *passing shot* and the *lob*.

❖ Slice

In racquet sports, *backspin* (also known as *slice* or *under spin*), is a shot such that the ball rotates backwards after it is hit. The trajectory of the shot involves an upward force that lifts the ball. While a normal hit bounces forward, backspin shots tend to bounce off the sides or even bounce up. This may make a receiver who has prepared for a different shot miss the ball when swinging.

A backspin shot is useful for defensive shots because a backspin shot takes longer to travel to the opponent, giving the defender more time to get back into position. Also, backspin shots tend to bounce lower once they reach the opposite court, making them more difficult to attack.

❖ Smash

A smash in tennis is a shot that is hit above the head with a serve-like motion. A smash can usually be hit with great force relatively safe and is often a shot that ends the point. Most smashes are hit fairly near the net or in mid-court before the ball bounces, generally against lobs that have not been hit high enough or deep enough by the opponent. A player can also smash a very high ball from the *baseline*, generally on the bounce, although this is often a less forceful smash.

Smash commonly refers to the *forehand smash*; backhand smashes are rare and more difficult to execute, especially for beginners. The grip used for a tennis smash is either a *continental* or an *Eastern grip*.

❖ Lob

A lob in tennis is hitting the ball high and deep into the opponent's court. It can be used as an *offensive* or *defensive weapon* depending on the situation. It is usually hit when an opponent is

standing near the net, waiting to volley. The ball should sail over the top of the opponent and into the open court behind him.

A *good offensive* lob cannot be reached by the opponent. It can win the point outright, although with some risks involved. Topspin greatly enhances the effectiveness of offensive lob but also makes the stroke more difficult.

A *defensive lob*, on the other hand, simply intends to push the opponent back to the *baseline* and prolong the point. When a player is pulled out of court, a defensive lob is also useful to buy time to run back and get into a better defensive position.

❖ The Drop Shot

A drop shot is a shot where the tennis ball is hit so that it just goes over the net. The ball's path is low and short. It is a perfect response to a player that is far away from the net, since the player is forced to run right up near to the net to retrieve the ball. It can also be used as a response to a player hitting volleys since the drop shot does not allow the player to hit the ball with impact.

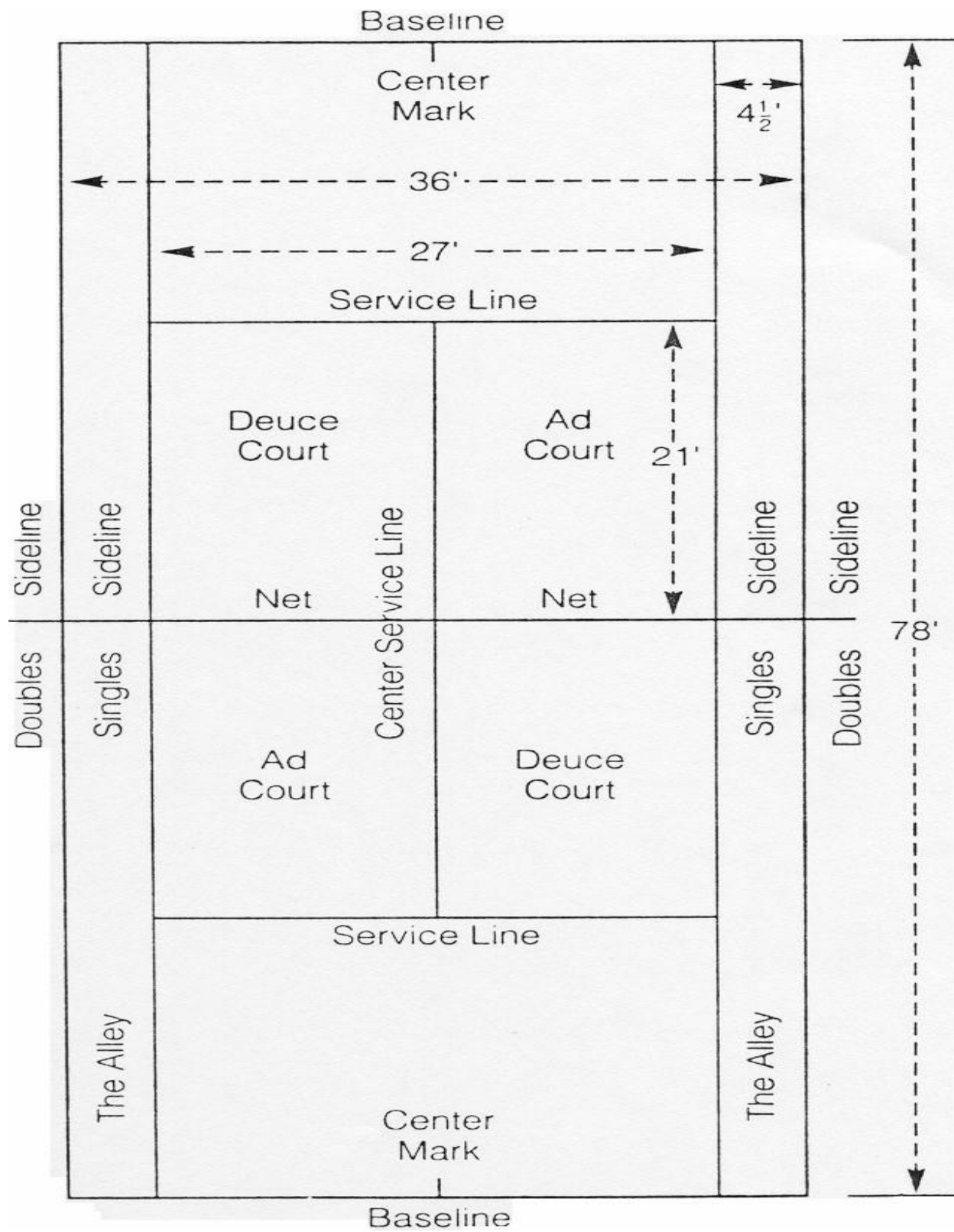
4.2. Rule and regulation of ground tennis

1. The Court

The Court shall be a rectangle 78 feet (23.77 m) long and 27 feet (8.23 m) wide. It shall be divided across the middle by a net suspended from a cord or metal cable of a maximum diameter of one-third of an inch (0.8 cm), the ends of which shall be attached to, or pass over, the tops of two posts, which shall be not more than 6 inches (15 cm) square or 6 inches (15 cm) in diameter. These posts shall not be higher than 1 inch (2.5 cm) above the top of the net cord. The centers of the posts shall be 3 feet (.914 m) outside the Court on each side and the height of the posts shall be such that the top of the cord or metal cable shall be 3 feet 6 inches (1.07 m) above the ground.

2. Permanent Fixtures

The permanent fixtures of the Court shall include not only the net, posts, singles sticks, cord or metal cable, strap and band, but also, where there are any such, the back and side stops, the stands, fixed or movable seats and chairs round the Court, and their occupants, all other fixtures around and above the Court, and the Umpire, Net-cord Judge, Foot-fault Judge, Linesmen and Ball Boys when in their respective places.



3. The Ball

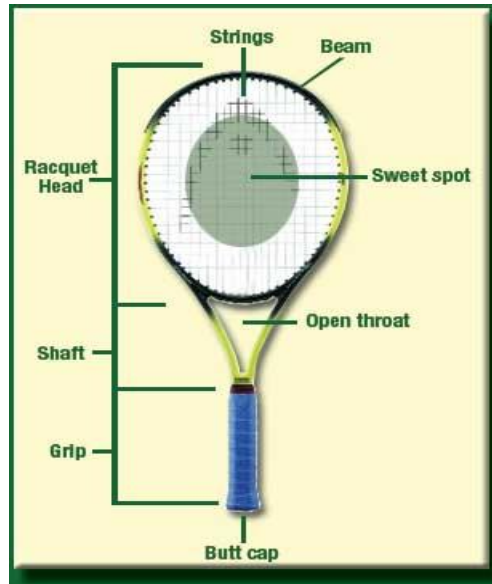
Balls that are approved for play under the Rules of Tennis must comply with the following specifications:

- a. The ball shall have a uniform outer surface consisting of a fabric cover and shall be white or yellow in color. If there are any seams they shall be stitch-less.
- b. The ball shall be more than 1.975 ounces (56.0 grams) and less than 2.095 ounces (59.4 grams) in weight.

4. The Racket

Rackets failing to comply with the following specifications are not approved for play under the Rules of Tennis:

- a. The hitting surface of the racket shall be flat and consist of a pattern of crossed strings connected to a frame and alternately interlaced or bonded where they cross; and the stringing pattern shall be generally uniform and in particular not less dense in the center than in any other area. The racket shall be designed and strung such that the playing characteristics are identical on both faces. The strings shall be free of attached objects and protrusions other than those utilized solely and specifically to limit or prevent wear and tear or vibration, and which are reasonable in size and placement for such purposes.
- b. The frame of the racket shall not exceed 29 inches (73.66 cm) in overall length, including the handle. The frame of the racket shall not exceed 12.5 inches (31.75 cm) in overall width. The hitting surface shall not exceed 15.5 inches (39.37 cm) in overall length, and 11.5 inches (29.21 cm) in overall width.
- c. The frame, including the handle, shall be free of attached objects and devices other than those utilized solely and specifically to limit or prevent wear and tear or vibration, or to distribute weight. Any objects and devices must be reasonable in size and placement for such purposes.
- d. The frame, including the handle and the strings, shall be free of any device which makes it possible to change materially the shape of the racket, or to change the weight distribution in the direction of the longitudinal axis of the racket which would alter the swing moment of inertia, or to deliberately change any physical property which may affect the performance of the racket during the playing of a point. No energy source that in any way changes or affects the playing characteristics of a racket may be built into or attached to a racket.



5. Server & Receiver

The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the Server, and the other the Receiver.

6. Choice of Ends & Service

The choice of ends and the right to be Server or Receiver in the first game shall be decided by toss. The player winning the toss may choose or require his opponent to choose:

- a. The right to be Server or Receiver, in which case the other player shall choose the end; or
- b. The end, in which case the other player shall choose the right to be Server or Receiver.

7. The Service

The service shall be delivered in the following manner. Immediately before commencing to serve, the Server shall stand with both feet at rest behind the base-line, and within the imaginary continuations of the center-mark and side-line. The Server shall then project the ball by hand into the air in any direction and before it hits the ground strike it with his racket and the delivery shall be deemed to have been completed at the moment of the impact of the racket and the ball. A player with the use of only one arm may utilize his racket for the projection.

8. Foot Fault

The Server shall throughout the delivery of the Service:

- a. Not change his position by walking or running. The Server shall not by slight movements of the feet which do not materially affect the location originally taken up by him, be deemed "to change his position by walking or running".
- b. Not touch with either foot any area other than that behind the base-line within the imaginary extensions of the center-mark and side-lines.

9. Delivery of Service

- a. In delivering the service, the Server shall stand alternately behind the right and left halves of the Court beginning from the right in every game. If service from a wrong half of the Court occurs and is undetected, all play resulting from such wrong service or services shall stand, but the inaccuracy of station shall be corrected immediately it is discovered.
- b. The ball served shall pass over the net and hit the ground within the Service Court which is diagonally opposite, or upon any line bounding such Court, before the Receiver returns it.

10. Service Fault

The Service is a fault:

- a. If the Server commits any breach of Rules 7, 8 or 9(b);
- b. If he misses the ball in attempting to strike it;
- c. If the ball served touches a permanent fixture (other than the net, strap or band) before it hits the ground.

11. Second Service

After a fault (if it is the first fault) the Server shall serve again from behind the same half of the Court from which he served that fault, unless the service was from the wrong half, when, in accordance with Rule 9, the Server shall be entitled to one service only from behind the other half.

12. When to Serve

The Server shall not serve until the Receiver is ready. If the latter attempts to return the service, he shall be deemed ready. If, however, the Receiver signifies that he is not ready, he may not claim a fault because the ball does not hit the ground within the limits fixed for the service.

13. The "Let"

In all cases where a let has to be called under the rules, or to provide for an interruption to play, it shall have the following interpretations:

- a. When called solely in respect of a service that one service only shall be replayed.
- b. When called under any other circumstance, the point shall be replayed.

14. The Let in Service

The Service is a let:

- a. If the ball served touches the net, strap or band, and is otherwise good, or, after touching the net, strap or band, touches the Receiver or anything which he wears or carries before hitting the ground.
- b. If a service or a fault is delivered when the Receiver is not ready (see Rule 12).

In case of a let, that particular service shall not count, and the Server shall serve again, but a service let does not annul a previous fault.

15. Order of Service

At the end of the first game, the Receiver shall become Server, and the Server Receiver; and so on alternately in all the subsequent games of a match. If a player serves out of turn, the player who ought to have served shall serve as soon as the mistake is discovered, but all points scored before such discovery shall stand. A fault served before such discovery shall not stand. If a game shall have been completed before such discovery, the order of service shall remain as altered.

16. When Players Change Ends

The players shall change ends at the end of the first, third and every subsequent alternate game of each set, and at the end of each set unless the total number of games in such set is even, in which case the change is not made until the end of the first game of the next set. If a mistake is made and the correct sequence is not followed the players must take up their correct station as soon as the discovery is made and follow their original sequence.

17. The Ball in Play

A ball is in play from the moment at which it is delivered in service. Unless a fault or a let is called it remains in play until the point is decided.

18. Server Wins Point

The Server wins the point:

- a. If the ball served, not being a let under Rule 14, touches the Receiver or anything which he wears or carries, before it hits the ground;

- b. If the Receiver otherwise loses the point as provided by Rule 20.

19. Receiver Wins Point

The Receiver wins the point:

- a. If the Server serves two consecutive faults;
- b. If the Server otherwise loses the point as provided by Rule 20.

20. Player Loses Point

A player loses the point if:

- a. He fails, before the ball in play has hit the ground twice consecutively, to return it directly over the net (except as provided in Rule 24(a) or (c)); or
- b. He returns the ball in play so that it hits the ground, a permanent fixture, or other object, outside any of the lines which bound his opponent's Court (except as provided in Rule 24(a) or (c)); or
- c. He volleys the ball and fails to make a good return even when standing outside the Court; or
- d. In playing the ball he deliberately carries or catches it on his racket or deliberately touches it with his racket more than once; or
- e. He or his racket (in his hand or otherwise) or anything which he wears or carries touches the net, posts, singles sticks, cord or metal cable, strap or band, or the ground within his opponent's Court at any time while the ball is in play; or
- f. He volleys the ball before it has passed the net; or
- g. The ball in play touches him or anything that he wears or carries, except his racket in his hand or hands; or
- h. He throws his racket at and hits the ball; or
- i. He deliberately and materially changes the shape of his racket during the playing of the point.

21. Player Hinders Opponent

If a player commits any act which hinders his opponent in making a stroke, then, if this is deliberate, he shall lose the point or if involuntary, the point shall be replayed.

22. Ball Falls on Line

A ball falling on a line is regarded as falling in the Court bounded by that line.

23. Ball Touches Permanent Fixtures

If the ball in play touches a permanent fixture (other than the net, posts, singles sticks, cord or metal cable, strap or band) after it has hit the ground, the player who struck it wins the point; if before it hits the ground, and his opponent wins the point.

24. A Good Return

It is a good return:

- a. If the ball touches the net, posts, singles sticks, cord or metal cable, strap or band, provided that it passes over any of them and hits the ground within the Court; or
- b. If the ball, served or returned, hits the ground within the proper Court and rebounds or is blown back over the net, and the player whose turn it is to strike reaches over the net and plays the ball, provided that he does not contravene Rule 20(e); or
- c. If the ball is returned outside the posts, or singles sticks, either above or below the level of the top to the net, even though it touches the posts or singles sticks, provided that it hits the ground within the proper Court; or
- d. If a player's racket passes over the net after he has returned the ball, provided the ball passes the net before being played and is properly returned; or
- e. If a player succeeds in returning the ball, served or in play, which strikes a ball lying in the Court.

25. Hindrance of a Player

In case a player is hindered in making a stroke by anything not within his control, except a permanent fixture of the Court, or except as provided for in Rule 21, a let shall be called.

26. Score in a Game

- a. If a player wins his first point, the score is called 15 for that player; on winning his second point, the score is called 30 for that player; on winning his third point, the score is called 40 for that player, and the fourth point won by a player is scored game for that player except as below: If both players have won three points, the score is called deuce; and the next point won by a player is scored advantage for that player. If the same player wins the next point, he wins the game; if the other player wins the next point the score is again called deuce; and so on, until a player wins the two points immediately following the score at deuce, when the game is scored for that player.

b. Optional Alternative Scoring System

The No-Ad System of Scoring may be adopted as an alternative to the traditional scoring system in paragraph (a) of this Rule provided the decision is announced in advance of the event. In this case, the following Rules shall be effective:

If a player wins his first point, the score is called 15 for that player; on winning his second point, the score is called 30 for that player; on winning his third point, the score is called 40 for that player, and the fourth point won by a player is scored game for that player except as below: If both players have won three points, the score is called deuce; one deciding point shall then be played. The receiver shall choose whether he wishes to receive the service from the right-half of the court or the left-half of the court. The player who wins the deciding point is scored the game.

27. Score in a Set

- a. A player (players) who first wins six games wins a set; except that he must win by a margin of two games over his opponent and where necessary a set shall be extended until this margin is achieved.
- b. The tie-break system of scoring may be adopted as an alternative to the advantage set system in paragraph (a) of this Rule provided the decision is announced in advance of the match.

Singles

- i. A player who first wins seven points shall win the game and the set provided he leads by a margin of two points. If the score reaches six points all the game shall be extended until this margin has been achieved. Numerical scoring shall be used throughout the tie-break game.
- ii. The player whose turn it is to serve shall be the Server for the first point. His opponent shall be the Server for the second and third points and thereafter each player shall serve alternately for two consecutive points until the winner of the game and set has been decided.
- iii. From the first point, each service shall be delivered alternately from the right and left Courts, beginning from the right Court. If service from a wrong half of the Court occurs and is undetected, all play resulting from such wrong service or services shall stand, but the inaccuracy of station shall be corrected immediately it is discovered.
- iv. Players shall change ends after every six points and at the conclusion of the tie-break game.
- v. The tie-break game shall count as one game for the ball change, except that, if the balls are due to be changed at the beginning of the tie-break, the change shall be delayed until the second game of the following set.

Doubles In doubles the procedure for singles shall apply. The player whose turn it is to serve shall be the Server for the first point. Thereafter each player shall serve in rotation for two points, in the same order previously in that set, until the winners of the game and set have been decided.

Rotation of Service The player (or pair in the case of doubles) whose turn it was to serve first in the tie-break game shall receive service in the first game of the following set.

28. Maximum Number of Sets

A match can be played to the best of 3 sets (the player/team needs to win 2 sets to win the match) or to the best of 5 sets (the player/team needs to win 3 sets to win the match).

33. The Doubles Game

All of Rules 1-32 shall apply to the Doubles Game except as so noted in rules 34-40.

34. The Doubles Court

For the Doubles Game, the court shall be 36 feet (10.97m.) in width, i.e. 4 1/2 feet (1.37m.) wider on each side than the Court for the Singles Game, and those portions of the singles side-lines which lie between the two service-lines shall be called the service side-lines. In other respects, the Court shall be similar to that described in Rule 1, but the portions of the singles side-lines between the base-line and service-line on each side of the net may be omitted if desired.

35. Order of Service in Doubles

The order of serving shall be decided at the beginning of each set as follows: The pair who has to serve in the first game of each set shall decide which partner shall do so and the opposing pair shall decide similarly for the second game. The partner of the player who served in the first game shall serve in the third; the partner of the player who served in the second game shall serve in the fourth, and so on in the same order in all the subsequent games of a set.

36. Order of Receiving in Doubles

The order of receiving the service shall be decided at the beginning of each set as follows: The pair who have to receive the service in the first game shall decide which partner shall receive the first service, and that partner shall continue to receive the first service in every odd game throughout that set. The opposing pair shall likewise decide which partner shall receive the first service in the second game and that partner shall continue to receive the first service in every even game throughout that set. Partners shall receive the service alternately throughout each game.

37. Service out of Turn in Doubles

If a partner serves out of his turn, the partner who ought to have served shall serve as soon as the mistake is discovered, but all points scored, and any faults served before such discovery, shall be reckoned. If a game shall have been completed before such discovery, the order of service remains as altered.

38. Error in Order of Receiving in Doubles

If during a game the order of receiving the service is changed by the Receivers it shall remain as altered until the end of the game in which the mistake is discovered, but the partners shall resume their original order of receiving in the next game of that set in which they are Receivers of the service.

39. Service Fault in Doubles

The service is a fault as provided for by Rule 10, or if the ball touches the Server's partner or anything which he wears or carries; but if the ball served touches the partner of the Receiver, or anything which he wears or carries, not being a let under Rule 14(a) before it hits the ground, the Server wins the point.

40. Playing the Ball in Doubles

The ball shall be struck alternately by one or other player of the opposing pairs, and if a player touches the ball in play with his racket in contravention of this Rule, his opponents win the point.

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