

SECTION-A

CHAPTER-1

HUMAN GROWTH AND DEVELOPMENT

Topic-1

Growth and Development

Concepts Covered *Meaning and definition of Growth and Development, Difference between growth and development, Stages of growth.*

Revision Notes

Introduction: Human being is never static. From conception to death, change is constantly taking place in his physical and psychological capacities. The two words “Growth” and “Development” are often used to describe these constant changes.

- Growth is the progressive increase in the size of a child or parts of a child.
- Development is progressive acquisition of various skills (abilities) such as head support, speaking, learning, expressing the feelings and relating with other people.
- **Growth:**
 - It is quantitative.
 - It comprises of height, weight, size and shape of body organs like brain, etc.
 - It is due to cell division.
 - It is for a limited period.
 - It can be measured.
 - It tells about one aspect of personality but in limited scope.
- **Development:**
 - It is quantitative as well as qualitative.
 - It comprises of the physical, cognitive, social and emotional changes.
 - It happens due to motor process and their interplay.
 - It takes place till death.
 - It can be observed by mature behaviour.
 - It deals with all the aspect of personality and has a vast scope.
- **Difference between Growth and Development:**
 - Growth is a whole process which includes growth of the body as well as growth of various aspects of a child's personality, e.g., physical, emotional, social and cognitive development. Development is a progressive change that happens in a child which increases the physical, social, mental and emotional capacities of the child. In the early stages of life, these changes are constructive and after middle age, there are destructive changes in the body which lead to old age.
- **The Stage of Growth:**
 - Growth and development of every child takes place according to his/her own schedule. This means that every child has his/her own pattern of growth and development. During the different stages of growth, various changes related to physical, mental, social, emotional and motor development take place.
 - The stages of growth can be classified into the following stages along with their characteristics:
 1. **Infancy:** The stage from birth to end of 5 years of age is called infancy. In this stage, the grasping power of an infant's brain becomes very strong. The power of memory also increases. The infant is able to remember the incidents of the past immediately. His/her thinking ability also increases. The infant understands the language clearly and speaks accordingly. His/her capability to know new words increases and the child starts understanding the simple conversation of adults. In this stage, the curiosity drive of the infant also increases and the infant tries to ask various questions and are easily satisfied by the answer of elder persons. The infants are emotional in this stage but they do not have their control over emotions. They usually exhibit or display their emotions through motor skill activities. In daily life, they forget their emotions such as sorrow and happiness, after some time. In this stage, the behaviour of infants depends upon imagination. In this stage, the infants learn the activities related to motor skills such as walking, running, jumping, catching, throwing, etc. In this way, they start using their physical organs, internal organs and sensory organs in a balanced way. They do whatever they like and leave what they don't like.

2. **Childhood:** The childhood stage begins from the 5th year and ends by the end of the 12th year. In this stage, the children are able to have enough control on their muscles. Their development becomes very fast. Their neuro-muscular coordination becomes efficient. In this stage, the concentration power of the children increases, but they cannot concentrate for a long time. Their thinking ability increases at a fast rate. Their power of memory, logic, thinking and decision making increases remarkably. By the end of this stage, they learn to control their emotions. During this stage, the social qualities develop in them very quickly. In this stage, children are more courageous, imaginative and adventurous. They usually follow the persons whom they admire blindly. In this stage, they have the best motor learning ability.
3. **Adolescence:** This is a stage of complex changes, which begins after childhood and ends before adulthood. Generally, it is supposed that the adolescent stage begins from 12 years and remains till 19 years, therefore it is also called "TEENAGE". During this stage, the growth of adolescents becomes spontaneous. Some characteristics of this stage are stated below:
 - (a) **Physical Characteristics:** In adolescent period, many physical changes take place spontaneously. The development of internal and external sexual organs begins in the adolescents rapidly. During the period of 12 to 14 years, various changes can be seen especially in girls. In this stage, menstrual cycle begins in girls and nightfall in boys. Hair starts appearing in the axilla and pubic region. The enlargement of breasts begins in girls. There are changes in voice also. Boys start getting broad chest, broad shoulders and normal buttock, whereas, girls develop less broad shoulders and chest. The hips of girls become very broad and legs become round. Owing to such changes they become restless, impatient, worried and upset naturally, because they do not have complete knowledge about such changes. Due to these reasons, their activities are not balanced.
 - (b) **Mental Characteristics:** Physical growth and mental growth go simultaneously, but it is not applicable for all the adolescents. It has been seen in case of some adolescents that they lag behind in mental growth in the previous stages, though they achieve physical maturity much earlier. In fact, they achieve mental growth later on, when they are able to go into the depth of a thing. They demand self-respect, dignity and self-independence. They remain in stress and become worried easily. They also indulge in day dreaming.
 - (c) **Emotional Characteristics:** The life of an adolescent is full of emotions. They are sometimes happy and at the same time sad and depressed. Usually, they are emotionally disgusted and disturbed.
 - (d) **Social Characteristics:** Usually, the adolescents adopt the way which is selected by them, but the society creates various obstacles in their way. In such conditions, the adolescents revolt against the traditions and customs of the society. During this stage, friends become very important for them.
4. **Adulthood:** The stage from 19 years of age to 65 years and above is called adulthood. By this time, most of the body's growth has taken place. Many more changes occur, as adults continue to age which are mainly caused due to external factors like:

(a) Hormonal activity	(b) Hereditary
(c) Nutrition	(d) Physical activity
(e) Sociocultural factors	

Topic-2

Factors Influencing Growth and Development

Concepts Covered: Influencing factors of growth and development.



Revision Notes

- The factors that influence growth and development of human beings are:
 - **Heredity:** It is the transmission of physical characteristics from parents to children through their genes. These are those factors that are transferred through genes.
 - **Environmental:** The environment plays a critical role in the development of children and it represents the sum total of physical and psychological stimulation the child receives. These are those factors that arise due to physical surroundings and society.
 - **Gender:** The gender of the child is another major factor affecting the physical growth and development of a child. Boys and girls grow in different ways, especially when nearing puberty. These are those factors that arise due to gender differences.
 - **Nationality:** These are those factors that arise due to belonging to a nation state.
 - **Nutrition:** It is a critical factor in growth as everything the body needs to build and repair itself comes from the food that we eat. These are those factors that arise due to eating habits and diet composition.

CHAPTER-2

PHYSICAL EDUCATION



Revision Notes

- The word physical education is derived from two separate words, "Physical" and "Education". The meaning of word Physical is something which relates to body and the word Education means systematic instructions or training. A combined meaning of these two words would be that systematic instruction or training which relate to physical activities or programme of activities, necessary for development and maintenance of human body, development of physical powers, or cultivation of physical skill.
- The literal meaning of 'physical' is 'body', which directly relates to physique (physical structure), health, strength, endurance, speed, agility, flexibility, and physical performance on the sports field.
- Physical Education includes the acquisition and refinement of motor skills, the development and maintenance of fitness for optimal health, getting knowledge about physical activities and exercise and development of positive attitudes towards physical activity to improve human performances.
- Physical Education develops body and mind. Moreover, it develops total personality related to physical, mental, social and emotional development of an individual. Physical education helps to develop good health and lead the person's life towards progress and wellness. It leads to a balanced development of individual.
- Physical Education has been defined differently by specific physical educationists. Some of the definitions of physical education are as follows:
 - **According to H.C. Buck,** "Physical education is the part of general education programme, which is considered with growth, development and education of children through the medium of big muscle activities. It is the education of whole child by means of physical activities. Physical activities are the tools. These are so selected and conducted as to influence every child's life physically, mentally, emotionally and morally."
 - **Charles A. Bucher** defines physical education as, "An integral part of total education process which has its aim—the development of physically, mentally, emotionally and socially fit citizens through the medium of physical activities which have been selected with a view to realise these outcomes."
 - In **Oberteuffer's** view, "Physical education is the sum of those experiences which come to the individual through movements."
 - In **Cassidy** says, "Physical education is the sum of changes in the individual caused by experiences centering around motor activity."
 - For **J.B. Nash**, "Physical education is that phase of the whole field of education that deals with big muscle activities and their related responses."
 - According to **J.F. Williams** and **C.L. Brownell**, "Physical Education is the sum of man's physical activities selected as to kind and conducted as to outcomes."
 - According to **C.L. Brownell**, "Physical Education is the accumulation of wholesome experience through participation in large muscle activities that promote optimum growth and development."
 - According to **Central Advisory Board of Physical Education and Recreation**, "Physical education is the education through physical activities for the development of the total personality of the child to its fullness and perfection in body, mind and spirit."
- **AIM of Physical Education:** "Optimum/all-round/wholesome development of an individual" is the aim of physical education.
- **Objectives of Physical Education:** The objectives of physical education are as follows:
 - **Physical Development**
 - ◆ It is one of the foremost objectives of physical education.
 - ◆ Development of organ systems such as circulatory system, digestive system, nervous system and muscular system.
 - ◆ Development in size, shape and efficiency of all body parts including muscles and bones.
 - **Psychological/Mental Development**
 - ◆ It is related to mental development of a person.
 - ◆ Participation in various activities enables an individual to learn to draw certain conclusions.
 - ◆ Various physical activities require alertness of mind, deep concentration and calculated movements.
 - **Social Development**
 - ◆ It is related to the development of social traits essential for better adjustment in life.

- ◆ Players get to know each other in-spite of different culture, domiciles and backgrounds.
- ◆ It is one of the sources to attain leadership qualities like fair play, team spirit, cooperation, tolerance, sportsmanship and courtesy.
- **Emotional Development**
 - ◆ Emotions are vital for every individual but excess is always bad.
 - ◆ One of the major objectives is that it helps to develop/control various emotions like fear, pleasure, hope, anger, jealousy, etc.
 - ◆ By participating in various physical education programmes, an individual starts having control over his/her emotions.

CHAPTER-3

BODY TYPES



Revision Notes

- **Body Types:** The classification of students is very important for a teacher in the field of physical education and sports because he/she can teach various physical activities, games and sports in a better and effective way to the students only after having the proper classification on the basis of physical, mental and practical aspects.
- The classification of individuals by William Herbert Sheldon on the basis of physical, mental and practical characters is stated below:
 1. **Endomorph:** Such individuals have short arms and legs. They have rounded physique. The limbs seem to be shorter because there is a lot of deposit of adipose tissues. The upper parts of arms and legs are significantly thicker than the lower parts. It is hard for them to lose weight. They have soft body. They have underdeveloped muscles. They have the capacity for high fat storage and can become fatty easily.
 2. **Mesomorph:** Mesomorphs are found between the other two body types and are generally described as muscular. They have athletic physique and balanced body composition. They are able to increase their muscle size quickly and easily. They have well developed rectangular shaped body. They have thick bones and muscles. Their chest and shoulders are larger and broader in comparison to their waistline. They are physically capable of doing a lot of activities and tend to be athletically aggressive.
 3. **Ectomorph:** The individuals who have an ectomorph body are usually referred to as slim persons because their muscles and limbs are elongated. They have weak constitution of body and usually face great difficulties in gaining weight. They have flat chests and have less muscle mass. The lack of muscle mass creates the impression that they are taller than they really are. They do not have a lot of strength but they dominate the endurance sports because their body type is naturally suited to perform wonderfully in endurance activities.
- **Training according to Body types:**
 1. **Ectomorphs:** It is difficult for Ectomorphs to gain muscle as well as fat. To help with this, Ectomorphs try focusing on compound movements as opposed to isolated movements. This is because Ectomorphs use more muscle groups in such type of exercises. For example, the bench press works out muscles in the chest, shoulders and triceps using shoulders and elbow. In contrast, the biceps curl is an isolated movement that only uses the biceps. While Ectomorphs should not completely ban isolation movements from their training, their main focus should be on the big compound exercises, followed by isolation movements as accessories to finish a workout.
 2. **Endomorphs:** To help make the body into losing fat, it is best for endomorphs to up their intense aerobic exercise by focusing on interval training such as HIIT (high-intensity interval training) over LISS (low-intensity steady state cardio). They should train their overall body to see results and not just focus on one area. To further enhance their metabolism, endomorphs should include both hypertrophy (muscle building – heavy weight, fewer reps) with conditioning. This way, their metabolism will be fired up, even hours after training is done.
 3. **Mesomorphs:** In between ectomorph and endomorph, is the mesomorph body type. Mesomorphs find it easier to build muscle and lose fat than the ectomorphs and endomorphs respectively. This is why the mesomorph body type means that one does not have to go insanely heavy on the weights to get results. One can lift moderately and can still progress. However, it is also best to include some aerobic exercises as well, because while they can lose fat easier than mesomorphs, it doesn't mean that they are completely immune. Aerobic exercises will help get their heart rate up and induce better blood pumping.

➤ **Nutritional requirements of different body types:**

- Ectomorphs:** People with the ectomorph body type are able to get away with eating more carbohydrate than endomorphs and mesomorphs. However, this doesn't mean that one can eat whatever he/she wants without affecting their body. It is best to stick to complex carbohydrates that can leave feeling fuller for longer period. It will also help push protein to muscles to help them grow. This includes brown rice and brown bread.
- Endomorphs:** Endomorphs do need to have a stricter eating plan than the others. Unlike ectomorphs, those with the endomorph body type should eat fewer carbohydrates and increase their higher protein intake. They should avoid simple carbohydrates like white bread and eat more complex ones.
- Mesomorphs:** The eating plan of mesomorphs should include equal amounts of protein and fat, with a moderate amount of carbohydrates making up the rest. They should still focus on complex carbohydrates to help give body energy and keep themselves feeling fuller in a sustainable and healthy way.

CHAPTER-4

PHYSICAL FITNESS

Topic-1

Physical Fitness – Meaning and Importance

Concepts Covered: *Meaning & Definition of physical fitness, Its importance.*



Revision Notes

Physical fitness is the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being.

- **Physical fitness:** It is used in the context of two meanings: General fitness (a state of health and well-being) and specific fitness (the ability to perform specific sports or occupational skills). Fitness can be further subdivided into five categories: Cardiovascular endurance, muscular strength, muscular endurance, flexibility and body composition. The criterion for physical fitness has also been expanded to include the capacity to meet physical demands in an emergency situation.
- Physical fitness is the capacity of the heart, blood vessels, lungs and muscles to function at optimum efficiency.
- It is the body's ability to function efficiently and effectively in work and leisure activities, not only at a set point of time, but at various ages and stages, within a person's life cycle. The key is in finding optimum health within the limits of one's lifestyle in order to be able to resist hypokinetic diseases.

➤ **Importance of Physical Fitness**

- **Overall Health** – A regular fitness regime helps in improving the overall health of an individual. A brisk walk for half an hour and free hand exercise can keep oneself fit. It enhances blood circulation and improves immunity as well.
- **Boosts Energy** – After working out or after a session of yoga, one shall feel rejuvenated and energised throughout the day. Contrary to this, if one's lifestyle is sedentary and lethargic, the individual will feel tired and sluggish the entire day.
- **Weight Reduction** – This is the main advantage of being fit. Working out regularly is one of the natural weight loss methods. One can burn extra calories; the individual will also remain in shape. Therefore, weight reduction is one of the important benefits of physical fitness.
- **Strong Build** – Staying fit with regular workouts and muscle building makes the bones strong. People suffering from backache, shoulder pain, etc. must exercise regularly.
- **Mental Strength:** A fit body is not only physically strong but mentally strong as well. A combined routine, including proper exercise and diet, have a positive effect on brain function. It elevates flow of blood to brain and enhances one's memory. It also keeps oneself mentally strong.
- **Personality Development:** Staying fit makes one look good. The more one indulges into healthy habits, the more overall looks improve. This increases confidence level and grooms personality. One feels fresh and rejuvenated throughout the day. The mood remains happy and optimistic too.

Topic-2

Components of Physical Fitness

Concepts Covered: Physical fitness components, Meaning of Cardiovascular fitness/ Endurance, Strength, Flexibility, Power, Speed, Coordinative abilities, Agility, Balance & its types.

Revision Notes

➤ There are eight (8) components of Physical Fitness. They are directly or indirectly interrelated with each other. Each component has its own importance in different games and sports.

➤ These components are:

- **Cardiovascular/respiratory Endurance:** It is the ability to do work for longer duration or sustain fatigue. Cardiovascular endurance or cardiopulmonary endurance or respiratory endurance refers to the efficiency of heart, lungs and vascular system's delivery of oxygen-rich blood to working muscles during activities that last longer than 90 seconds. Cardio means related to heart, vascular means related to blood vessels, and pulmonary means related to lungs.
- **Strength:** It is the ability to do work against resistance or overcome resistance. Muscular strength is the amount of force which muscles can exert against resistance for short duration, anaerobic (without oxygen) activities. Resistance includes external objects such as free weights or household objects, or even own body weight during body-weight exercises. Physiologically, muscular strength is the ability of cells to supply muscle energy in the form of ATP (adenosine triphosphate) to muscle fibers for concentric, eccentric and isometric contractions in time frames ranging from 0 seconds to 15 seconds.
- **Flexibility:** Flexibility is the range of motion possible for each of the joints or group of joints.
- **Power:** The ability to perform one maximum effort in a short period of time as possible. For example, fullbacks in football muscling their way through other players and speeding to advance the ball and volleyball players getting up to the net and lifting their bodies high into the air.
- **Speed:** Speed is the ability to perform a task in less time as compared to others. A physically fit person has better speed than a person who is not in best of health.
- **Co-ordination or Coordinative Abilities:** The coordinative abilities are those abilities of an individual which enable the individual to do various related activities properly as well as efficiently. It is the ability to use different senses together with body parts, or to use two or more body parts together. For example, dribbling a basketball. Using hands and eyes together is called hand-eye coordination.
- **Agility:** Agility is the ability to change direction quickly while the body is in motion. For example, changing directions to hit a tennis ball or kick a football or shoot a basketball.
- **Balance:** It is the ability to keep an upright posture while standing still or moving. For example, in-line skating & stretching. The balance is of two types:
 - **Static Balance:** It is the ability to maintain one's equilibrium in a fixed position.
 - **Dynamic Balance:** It is the ability to maintain one's equilibrium while the body is in motion.

Topic-3

Factors Affecting Physical Fitness

Concepts Covered: Physical fitness affecting factors, Heredity, Posture.

Revision Notes

➤ The various factors that affect physical fitness are:

- **Heredity:** Hereditary factors play a very important role in affecting the physical fitness and wellness. Size, shape, structure and height are involved in hereditary factors.
- **Nutrition:** Nutrition or balanced diet improves our wellness. Unbalanced diet and malnutrition affect the physical fitness and wellness.
- **Environment:** Untidy, dirty and polluted environment affects the physical fitness and wellness. Safe, clean and hygiene help to maintain the environment.
- **Training:** Proper training is an essential factor affecting the physical fitness. Proper training increases the ability to a great extent. Proper training means availability of proper facilities and guidance of appropriate methods of training.

- **Illness:** Diseases and injury greatly affect the physical fitness. We should follow the obstructive and remedial measure which does not affect the physical fitness.
- **Self-motivation:** The individual must be self-motivated to be physically fit. All other factors can be overcome if one is self-motivated to be physically fit.
- **Emotional stability:** When we take any types of stress, tension and worries its results reduce our physical fitness. To maintain physical fitness of the body, a person must be emotionally stable.
- **Lifestyle:** Lifestyle also affects physical fitness of an individual. It plays an indirect role in influencing physical fitness it has been observed that the people who have improper lifestyle are likely to have less physical fitness.
- **Posture:** Everyone appreciates good posture of an individual. Good posture enhances physical fitness. It is also the symbol of wellness. The person who does not have good posture tends to have a lower level of physical fitness.
- **Age:** It is the major factor influencing physical fitness. Usually, maturity can be defined by chronological, skeletal and physiological age.
- **Gender/sex:** Prior to adolescence boys and girls do not differ substantially in height, weight, girth, bone width and body composition. But at maturity they differ significantly on various parameters.

CHAPTER-5

SPORTS TRAINING

Topic-1

Sports Training – Meaning, Aims and Importance

Concepts Covered: *Meaning & Definition, Aim, Importance of sports training, Setting of goal, Technique, Tactics.*

Revision Notes

- **Training:** The word 'Training' means the process of preparing for some tasks. This term is widely used in sports.
- **Sports training:** The term sports training denotes preparing of the sports persons for the highest level of performance. Sports training are the physical, mental, intellectual, psychological and moral preparation of an athlete or a player by the means of physical exercises.
- **Concept of Sports Training:** Sports training is the process of preparation for a sport performance. It consists of four parts:
 - Conditioning training (Strength training, endurance training, flexibility training) (physical preparation)
 - Training of technique (Technical preparation)
 - Training of tactics (Tactical preparation)
 - Psychological training (Mental preparation)
- Before considering the technical aspects of training, experts recommend ten concepts as the backbone of any successful training programme:
 1. **Define goals:** One may have one primary goal and several minor ones.
 2. **Match sport to goals and abilities:** One should carefully evaluate physical, emotional, and social needs and abilities.
 3. **Set intermediate goals:** Should have several sets of goals: general goals, long-range goals, season goals, monthly, weekly, even daily goals.
 4. **Plan workout:** Divide workout into four phases: warm-up, skills practice, match-related practice, cooling-down.
 5. **Get professional coaching help:** Ask the coach to analyse one's game, correct the form, and help to plan workouts.
 6. **Join a club or sports organisation:** Not only will enjoy working out with others, the trainee will also learn from them.
 7. **Maintain year-round fitness:** Ideally, the off-season should be used to rest and to work on building strength, endurance, or aerobic capacity without the strain of competition.
 8. **Prevent injuries:** In addition to avoiding sport-specific injuries, one should devote part of each workout to general injury prevention. Warming up, stretching and cooling down are the key steps of injury prevention. The protective equipment is as much part of the game as the rules.
 9. **Use sport-specific training:** Sport-specific training is the best way to develop the fine neuromuscular co-ordination and judgment called skill. Depending on the sport, one will also develop some cardiovascular fitness, endurance, strength, and speed.

- 10. Enjoy the training:** Some of the reasons why athletes stop enjoying their sport are overtraining, poor goal setting, or unrealistic expectations.

➤ **Aim and Importance of Sports Training:**

- Builds up strength and endurance
- Builds motivation
- Improves knowledge of the respective sports
- Increases muscle tone
- Improves agility
- Improves the rate of waste product disposal
- More resistant to injury and illness
- Increases self-esteem
- Improves skill levels
- Builds confidence
- Facilitates good circulation
- Improves flexibility
- Speeds up recovery time
- Improves concentration

Topic-2

Principles of Sports Training

Concepts Covered: Progression in sports training, Overload ways, Rest, Relaxation & Recovery, Variety of training, Meaning of periodisation, Micro cycle, Meso cycle, Macro cycle.



Revision Notes

➤ **Principles of Sports Training:**

1. **Principle of Individuality:** Each athlete responds differently to the same training stimulus. There are many factors that alter the training response: genetics, maturity, nutrition, prior training, environment, sleep, rest, stress, illness or injury, motivation, etc.
2. **Principle of Specificity:** Energy pathways, enzyme systems, muscle fibre types, and neuromuscular responses adapt specifically to the type of training to which they are subjected. For example, strength training has little effect on endurance. Conversely, endurance training activates aerobic pathways, with little effect on speed or strength. A well-rounded training programme contains a variety of elements (aerobic, anaerobic, speed, strength, flexibility) and involves all of the major muscle groups in order to prevent imbalances and avoid injuries.
3. **Principle of Progression:** According to this principle, the overload should not be increased too rapidly. If the overload is increased too rapidly, it may result in injury or muscle damage. Exercising above the target zone can be dangerous. The principle of progression also makes us realise the need for proper rest and recovery. The constant overload can lead to exhaustion and injury.
4. **Principle of Overload:** The training load must be higher than the load of normal daily activities. Training loads must be increased gradually, however, to allow the body to adapt and to avoid injury (system failure due to overloading). Varying the type, volume, and intensity of the training, the load provides the body an opportunity to recover and to over-compensate. Loading must continue to increase incrementally as adaptation occurs, otherwise the training effect will stagnate and further improvement will not occur.
5. **Principle of Adaptation:** Adaptations to the demands of training occur gradually over long periods of time. Efforts to accelerate the process may lead to injury, illness or "overtraining". Many adaptive changes reverse when training is not an adequate one.
6. **Principle of Recovery:** It is a well-known fact that the body regenerates during rest and becomes better and stronger than before. So, the training programmes should be conceived in such a way that there should be proper rest in interval between training activities.
7. **Principle of Reversibility:** A regular training stimulus is required for adaptation to occur and to be maintained. Without suitable and repeated bouts of training, fitness levels remain low or regressive to their pretraining levels.
8. **Principle of Variance:** Muscle groups adapt to a specific training stimulus in about three weeks and then stagnate. Variations in training and periods of recovery are needed to continue progressive loading without the risks of injury and/or overtraining. Training sessions should alternate between heavy, light and moderate in order to permit recovery. The content of training programmes must also vary in order to prevent boredom and staleness.
9. **Principle of Frequency:** The number of times or frequency of doing an exercise for longer stretch of time is increased by training a greater number of times each week.
10. **Principle of Continuity:** Training should be a continuous process. There should not be any breaks. There should not be a long period of inactivity. It has been observed that discontinuance of training reduces the psychological capacities of sports persons. Along this, the interval between two training sessions should be maximum but not too long.
11. **Principle of Active Participation:** The performance of an athlete is the result of athlete's efforts and coach's skills. The principle of active participation means that for an effective training programme, the athlete must participate actively and willingly.

12. **Principle of Periodisation:** Training cycles usually last about 3 weeks, with a week of lower-intensity recovery before starting the next cycle. Skills acquisition should not be emphasised during a high-intensity training cycle but should be reserved for periods of lower volume and intensity.
13. **Principle of Intensity:** It defines the amount of effort that should be invested in a training program or in any one session. There must be a balance between finding enough intensity to overload the body (so it can adapt) but not so much that it causes overtraining.

CHAPTER-6

SAFETY IN SPORTS

Topic-1

Sports Related Injuries and First-Aid

Concepts Covered: Meaning & Definition of Injury/Sports Injury, First-aid, Treatment of the injuries, Types of fracture.



Revision Notes

- **Muscle Strains:** Muscle injury caused by pulling or twisting of muscle or tendon
 - **Prevention -**
 - ◆ Proper conditioning during preparation
 - ◆ Adequate warm-up before training or sports activity
 - ◆ Smooth and clean sports area
 - ◆ Alertness while playing
 - ◆ Complete knowledge about the game
 - ◆ Discontinue playing in case of fatigue
 - **First Aid**
 - ◆ Make the affected area comfortable
 - ◆ Wash with cold water for 15-30 minutes
 - ◆ Do not apply ice directly but wrap it in clean cloth and then apply.
 - ◆ In case of excessive pain, take a painkiller or paracetamol
 - ◆ Apply warm water after 5 days
 - ◆ Take rest for at least a week
- **Torn ACL – ACL (Anterior Cruciate Ligament)** - one of the major stabilising ligaments of the knee
 - **Cause:** Slowing down and trying to cut, pivot or change directions
 - **Prevention:**
 - ◆ Proper conditioning during preparation
 - ◆ Alertness while playing
 - ◆ Discontinue playing in case of fatigue
 - **First Aid:** RICE (Rest Ice Compression and Elevation)
- **Torn MCL – MCL (Medial Collateral Ligament)** – the most important ligament of the knee
 - **Cause:** external rotational forces are placed on the knee joint
 - **Prevention:**
 - ◆ Proper conditioning during preparation
 - ◆ Alertness while playing
 - ◆ Discontinue playing in case of fatigue
 - **First Aid – RICE** (Rest Ice Compression and Elevation)
- **Shin splints:** pain in front part of the leg between the knee and the ankle.
 - **Prevention**
 - ◆ Use of proper protective gear
 - ◆ Regular exercise
 - **First Aid – Resting and Icing**
- **Bone Injuries:** These include Simple fracture, Comminuted fracture, Compound fracture, Impacted fracture, Complicated fracture and Green Stick fracture.
 - **Simple fracture:** Breaking of bone at one place without any effect on skin and muscles.

- **Comminuted fracture:** Breaking of bone at more than one place without any effect on skin and muscles.
 - **Compound fracture:** Breaking of bone along with damage to skin and muscles.
 - **Impacted fracture:** Breaking of bone and entering of broken end into another bone.
 - **Complicated fracture:** Breaking of a bone and its damage to the internal organs.
 - **Green Stick fracture:** Breaking or bending of delicate bones of children due to stress.
 - **Causes of fractures:**
 - ◆ Unnatural movements
 - ◆ Sudden heavy impact
 - ◆ Sudden fall
 - ◆ Direct hit
 - ◆ Osteoporosis
 - ◆ Excessive running or walking.
 - **Prevention of fracture:**
 - ◆ Adequate warm-up before training or sports activity
 - ◆ Smooth and clean sports area
 - ◆ Alertness while playing
 - ◆ Complete knowledge about the game
 - ◆ Eat well balanced diet
 - ◆ Wear proper footwear
 - ◆ Should not play rashly
 - **First aid steps:**
 - ◆ Give rest to the affected area
 - ◆ If there is bleeding, try to stop the bleeding first
 - ◆ Apply splints to the affected area. Splints can be made from wood, plastic, metal, etc.
 - ◆ Apply ice
 - ◆ Consult the doctor immediately
- **Plantar Fasciitis** – tissues on bottom of foot get inflamed
- **Cause**
 - ◆ Excess running
 - ◆ Flat feet
 - ◆ Overweight
 - **Prevention**
 - ◆ Regular exercise
 - ◆ Adequate rest time between running
 - **First Aid**
 - ◆ Rest for few days
 - ◆ Apply ice pack on the heels
 - ◆ Oral pain reliever
 - ◆ Apply athletic tape on foot
- **Sprained ankle** – Ligament injury caused at ankle due to falling or twisting of ligament.
- **Prevention:** Proper conditioning during preparation
 - ◆ Adequate warm-up before training or sports activity.
 - ◆ Smooth and clean sports area
 - ◆ Alertness while playing
 - ◆ Complete knowledge about the game
 - ◆ Discontinue playing in case of fatigue
 - ◆ Eat well balanced diet
 - ◆ Wear proper footwear
 - **First Aid:** There are two methods PRICE and MICE
 - ◆ **PRICE:** It stands for Protect Rest Ice Compression and Elevation – This is followed for first 48 hours of the injury. After that, MICE is followed.
 - ◆ **MICE:** It stands for Mobilisation Ice Compression Elevation - This is followed after 48 hours from the injury till complete healing of the injury.
- **Tennis elbow:** caused due to excessive gripping activities
- **Prevention**
 - ◆ Regular stretching and strengthening exercises
 - ◆ Adequate rest hours
 - ◆ Avoid over training

- **First Aid**
 - ◆ Rest for few days
 - ◆ Apply ice pack on the elbows, wrists and lower half of the arm
- **Low back pain** – caused due to repetitive and overuse of spine structure
 - **Prevention:**
 - ◆ Comprehensive physical therapy treatment
 - ◆ Regular Trunk stabilisation exercises
 - **First Aid**
 - ◆ Apply RICE
 - ◆ Basic physiotherapy exercises
- **Hip bursitis** – deposition of chalky material on skin lining
 - **Cause**
 - ◆ Continuous stress
 - ◆ Infection
 - ◆ Trauma
 - **Prevention**
 - ◆ Adequate rest intervals
 - ◆ Regular consultation with the physician
 - **First Aid** – Apply MICE
- **Concussion** - injury to the brain, due a blow to the head where the brain is jarred or shaken.
 - **Prevention** – wear proper gear while exercising or practicing for the sport.
 - **First Aid**
 - ◆ Rest
 - ◆ Reduced activities for the first 48 hours
 - ◆ Gradual increase in activities after first 48 hours
- **Achilles tendinitis** – caused due to overuse of Achilles tendon (tissue band) connecting lower half to heel of the foot
 - **Prevention**
 - ◆ No sudden increase in intensity or duration of runs
 - ◆ Irregular exercising habits
 - ◆ Choose shoes carefully
 - ◆ Stretch daily
 - ◆ Cross train
 - **First Aid** – Apply PRICE.
- **First-Aid:** First Aid is the immediate and temporary care given to the victim of an accident or sudden illness. Purpose of first aid is the immediate care till the medical aid is given by the competent and qualified medical personnel.

Topic-2

Prevention of Injuries

Concepts Covered *Warming-up, Cooling down, Uses of sports gear to avoid injuries.*



Revision Notes

- The sports injuries can be prevented by observing these simple steps:
 - Warming up before the event or training
 - Cooling down after the event or training
 - Maintaining physical fitness
 - Use of correct gear and equipment
 - Maintaining the equipment properly
 - Regular update knowledge about the sport or activity
 - Always wearing the recommended protective gear
 - Adequate rest intervals between workouts
 - Regular supervision of teacher or professional sports coach
 - Proper training for development of skills and techniques
 - Safe sports facilities

CHAPTER-7

HEALTH EDUCATION

Topic-1

Health Education – Meaning and Importance

Concepts Covered *Meaning & definition of Health, Importance of health & health education, Objectives of health education, Meaning of Hygiene.*



Revision Notes

- **Health:** It is a state of complete physical, mental and social well-being and not merely the absence of disease or deformity. It is the quality of life that enables the individual to live fit and serve best.
- **Health Education:** It is a process that informs, motivates and helps people to adopt and maintain healthy practices and lifestyles, advocates environmental changes as needed to facilitate this goal and conducts professional training and research to the same end.
- **Objectives of Health Education:**
 - Develop healthy habits
 - Prevention against diseases
 - Impart health and hygiene knowledge
 - Improve living conditions
 - Awareness about first aid
- **Importance of Health Education:**
 - Sound attitudes towards health.
 - The basic mechanism and functions of human body.
 - Satisfactory health counselling and guidance services.
 - Discovering physical defects
 - Maintaining good health
 - Improving human relations
 - Encouraging health and hygiene conditions
 - Part of Safety Education
- **Personal Hygiene is an important component of health education.**
 - **Tips for care of skin:** Use good soap, take bath with fresh/lukewarm water, use clean towel, regularly clean genital and anal areas.
 - **Tips for care of hair:** Regularly comb, use good quality soap/shampoo, use amlas for washing hair, use eggs for retaining black colour of the hair.
 - **Tips for care of ears:** Clean wax regularly, don't use sharp objects for cleaning, use glycerine and soft cloth for cleaning ears.
 - **Tips for care of nails:** Keep nails neat and clean, cut nails at short and regular intervals, avoid nail biting.
 - **Tips for care of eyes:** Use cold water and clean cloth for cleaning eyes, do exercise of eyes, eat foods rich in Vitamins A and C, use sunglasses, watch TV and read books from a distance, read and write in proper light.
 - **Tips for care of nose:** Regularly clean the nose and mucus, performing Jal Neti Kriya; Kapal Bhati and Pranayama, avoid nose picking.
 - **Tips for care of hands:** Wash hands with soap and water before and after meals and after using toilets, thoroughly rinse the soap on all parts of hands and gaps between the fingers, dry hands with clean towel.
 - **Tips for care of feet:** Use a good scrubber, wear cotton socks, use two pairs of shoes alternatively, powdering the feet before wear the socks, go for regular pedicure at least once a month
 - **Tips for care of teeth:** Use inter dental brush, daily floss your teeth before sleeping, brush your teeth at least twice a day, gently massage the gums with brush.
 - **Tips for care of tongue:** Clean the tongue regularly with tongue cleaner, gently clean the tongue after meals.
 - **Tips for using hygienic clothing:** Use fresh and washed inner clothes every day, Iron the clothes to destroy lice and nits.

Topic-2**Nutrition**

Concepts Covered: Meaning of nutrition, Meaning of diet/balance diet, Components of diet; Carbohydrate, Fats, Protein, Minerals, Vitamins, Water, Meaning of malnutrition.

Revision Notes

- **Nutrition:** Nutrition is defined as the science of food and its relationship to health. In other words, it can be said that nutrition is the science of food which deals with the dynamic process in which the food consumed is digested.
- **Nutrients:** Essential substances present in the food.
- **Diet:** Contains variety of foodstuffs. This helps in protecting us from diseases and in the repair of worn out tissues and giving energy.
- **Balanced Diet:** A diet that contains right amount of carbohydrates, proteins, fats, minerals, salts, vitamins, roughage and water is called a balanced diet.
- **Roughage:** The fibre present in the food which helps to eliminate wastes from the body.
- **Elements of Diet:** A diet which contains all the foodstuffs necessary to maintain good health consists of following elements:

(i) Carbohydrates	(ii) Proteins
(iii) Fats	(iv) Minerals
(v) Vitamins	(vi) Water
- **Proteins:** Proteins are nutrients that help to build the body and make new cells. They help us in the repair of worn out tissues. They are especially important for growing children. They are called body building food. Milk, eggs, cheese, pulses, meat and fish have lots of proteins.
- **Carbohydrates:** Carbohydrates gives us energy to work. Sugar and starch are carbohydrates. Potato, rice, bread, banana and grapes are rich sources of carbohydrates. These are called energy giving foods.
- **Fats:** Fats provide us with twice as much energy as carbohydrates. We can store extra fat in our body to be used later. Butter, ghee and nuts are rich sources of fats, but too much of fats can lead to diseases like blood pressure, heart problem and obesity.
- **Vitamins:** Vitamins are needed by our body in a very small amount. They keep us healthy by helping the body to fight against the diseases. They also help our eyes, nerves, gums, skin, etc. to work properly.
- **Minerals:** Minerals are also needed in a very small quantity to keep us fit and healthy. Calcium is a mineral used for building bones and teeth. It is present in milk and green leafy vegetables. Iron is another mineral which helps our blood in carrying oxygen. These are called protective foods.
- **Water:** Almost two-third of our body is made up of water. Water helps our body to work well and maintain our body temperature. We need to drink at least 10-12 glasses or approx. 6-7 litres of water every day.
- **Malnutrition:** Malnutrition refers to a situation when one does not receive proper nutrition. It can be undernutrition or overnutrition.
 - Undernutrition is characterised by a lack of nutrients and insufficient energy supply.
 - Overnutrition is characterised by excessive nutrient and energy intake.

Topic-3**Dietary Modification and Meal Planning****Guidelines**

Concepts Covered: Nutrition requirements for sports person, Benefits of nutrition for sports performance, Importance of meal, Food supplements.

Revision Notes

- **Sports Nutrition:** Sports nutrition refers to the practice of diet and nutrition relating to sports performance. It is mainly concerned with consumption of quality food, that is, food rich in vitamins, minerals, supplements, proteins and fats by an athlete during training or competition. A successful performance of an athlete is a combination of systematic training and a sensible approach towards nutrition.
- **Benefits of Sports Nutrition:**
 - (i) Delays the onset of fatigue

- (ii) Helps in enhancing performance
 - (iii) Improves body composition and strength
 - (iv) Enhances concentration
 - (v) Promotes optimal recovery
 - (vi) Reduces the potential for energy
 - (vii) Reduces the risk of heat cramps
 - (viii) It enables training for longer duration
 - (ix) Helps in maintaining healthy immune function
- **Pre-competition Meal:** The pre-competition meal is the meal that is consumed during the day of competition or just before the competition as it provides calories, nutrients and liquids that is needed by an athlete to complete the competition to its optimum level.
- Some foods recommended for Pre-Competition Meal are:
- Sandwich
 - Fruit shake
 - Low fat yogurt
 - Vegetables, rice, fish
 - Non-fat chocolate milk
 - String Cheese
- **Importance of Pre-Competition Meal:**
- (i) Avoids being hungry during the competition
 - (ii) Provides plenty of energy available for competition
 - (iii) Helps in enhancing stamina and endurance
 - (iv) Allows the stomach to be relatively empty at the start of competition
 - (v) Helps in maintaining normal blood sugar
- **During Competition Meal:** It refers to the food that is consumed within the duration of competitive period. The aim of **during competition meal** is to conserve muscle glycogen and maintain blood pressure.
- Some foods recommended for during competition meal are:
- Cereal bars
 - Sports drinks
 - Sports gels
 - Three small bananas
 - Jelly beans
 - Sports bars
 - Liquid meal supplement
- **Importance of During Competition Meal:**
- (i) Helps in replacing fluids lost in sweat and reduces the risk of heat stress, maintain normal muscle function.
 - (ii) Helps in refuelling the muscle and liver glycogen.
 - (iii) Consumption of sports drink maintains blood volume, regulate body temperature.
- **Post Competition Meal:** It is the meal which is consumed after the competition is over. It should be rich in protein and carbohydrate for restoration of liver glycogen store.
- Some foods recommended for the post competition meal are:
- Fruit smoothie
 - Vegetables
 - Chicken roll
 - Eggs, Fish
 - Whole grain bread
 - Peanut butter spread
 - Yogurt with fresh fruits
 - Fruit juice
- **Importance of Post Competition Meal:**
- (i) Consuming protein assists in repairing the torn tissues
 - (ii) Restoring the fluid and electrolytes lost in sweat
 - (iii) Supporting the immune system to handle the damage
- **Food Supplements for Children:** Food supplements are concentrated sources of nutrients taken as dietary tone-up. They are given in addition to the regular diet. Food supplements are vitamins, minerals, herbs etc. We can take these in the form of pills, capsules, powder, drinks and energy bars. Food supplements can add missing nutrients to diet.

➤ **Advantages:**

- (i) Give necessary protein to the body
- (ii) Help in tissue maintenance
- (iii) Develop immunity in the body
- (iv) Give necessary growth to the body
- (v) Maintain optimum health

➤ **Disadvantages:**

- (i) Can lead to unwanted weight gain
- (ii) Can cause liver abnormalities
- (iii) Lead to indigestion

➤ **Need for Food Supplements:** No doubt that supplements play a vital role in proper growth and development of children. Though, it is not essential to consume food supplements but it becomes necessary when there is a lack of proper nutritious diet. In fact, it can be said that food supplements are unnecessary, if a child takes a balanced diet regularly. Moreover, there are various food supplements which have no practical effect. For e.g., food supplement Omega-3 fatty acids have been shown to be without any benefit for healthy children.

➤ **Precautions taken before taking food supplement:**

- (i) Consult a doctor first.
- (ii) Before purchasing, an individual should ensure that it is free from preservatives, contains no filter and no added sugar.
- (iii) Don't pay heed to the word of salesmen or advertisements.

CHAPTER-8

CAREERS IN PHYSICAL EDUCATION



Revision Notes

➤ **Courses in Physical Education:** After Class XII- B.PE, B.PED, M.PE, M.PED, M.PHIL, PHD and various diploma courses.

Career Options in Physical Education:

➤ **Teaching Career in Physical Education:**

- **Physical Education Teacher (At Primary School Level, Middle School Level & Senior School Level):** Physical education teacher teaches health education and physical education in the schools. Coaching of different games and sports is also one of the duties of physical education teacher in schools. Apart from this, the physical education teacher has the responsibility for monitoring students, and to look after the lunch and hall facilities. Apart from this he needs to attend faculty and parent-teacher conferences, organise annual sports, etc.
- **Assistant Professor, Associate Professor and Professor:** Can work as Assistant Professor, Associate Professor and Professor in colleges and universities as per the qualification to teach physical education in various specialised area of subjects.
- **Sports Officer, Director of Physical Education and Sports:** Can work as Sports Officer, Director of Physical Education and Sports in colleges and universities. They are assigned to look after the various developmental aspects in the field of Physical Education and sports, organise various sports competitions, etc.
- Inspector of Physical Education in Government Dept. and Private sector
- Manager/Instructor of Health Club and Fitness centre
- Sports Commentator
- Police and paramilitary officers
- Officers in Indian Defence Service
- **Chiropractor:** Chiropractors diagnose and treat patients whose health problems are associated with the muscular, nervous and skeletal system, especially the spine. They take the patient's medical history. They can specialise in sports injuries, nutrition, etc.
- **Exercise Therapist:** Exercise therapists provide services that help restore function, improve mobility, relieve pain and prevent or limit permanent physical disabilities of people suffering from injuries or diseases.
- **Occupational Therapist:** Occupational therapists help people to improve their ability to perform tasks in their daily living and working environment. They work with individuals who have conditions that are mentally, physically, or emotionally disabled. They are also known as counsellor.

SECTION - B

CHAPTER-1 CRICKET



Revision Notes

➤ **History of Game:**

- According to the world famous book of cricket 'Wisden', the game of cricket was mentioned for the first time in 1900 A.D.
- The word 'cricket' was first time used in the bible of cricket.
- The teams of London and Kent had played the first match of cricket.
- Cambridge and Oxford Universities also started playing cricket in 1710 and 1729 respectively.
- The two official cricket clubs called Hambledon Club and Marylebone Cricket Club of England were formed in 1760 and 1787 respectively.
- The famous cricket ground called Lords is known to hold the first cricket match on June 27, 1788.
- In 1877, the first official cricket test match was played between Australia and England which was won by Australia.
- In 1909, the Imperial Cricket Conference was formed in England and also the game of cricket had received an international recognition.
- Initially, Imperial Cricket Conference was formed with England, Australia and South Africa as members. In 1926, India, West Indies and New Zealand also joined as members. Pakistan also joined as a member in 1952. In the year 1956, a new name is given to the conference as 'International Cricket Conference' or 'ICC'. At present there are 12 full members and 92 associate members in ICC.

➤ **Cricket:** This game is played between two teams of 11 players each. In this game, 2 players of first team bats at a time and make runs for the team. At the same time, the 11 players of second team bowls and fields in attempting to stop runs and dismiss the batsman of the first team. Every team has a captain who handles the team while playing and he/she is the decision making person for the team at every step during the play, like starting game, tossing a coin deciding which team will bat first.

In cricket, the various formats are as follows: Test Cricket (5 days and 2 Innings for each team), One Day International (50-50 overs match) and T-20 match (20-20 overs match)

➤ **Strategy and Tactics of Cricket:**

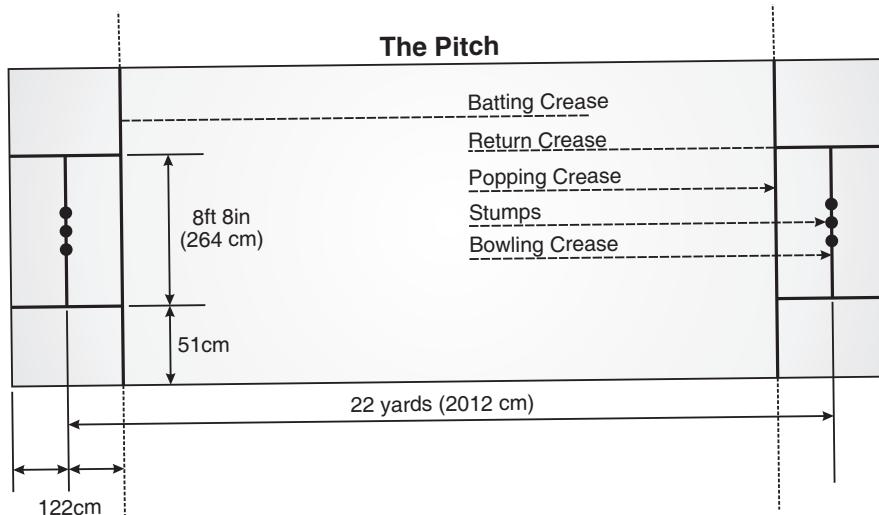
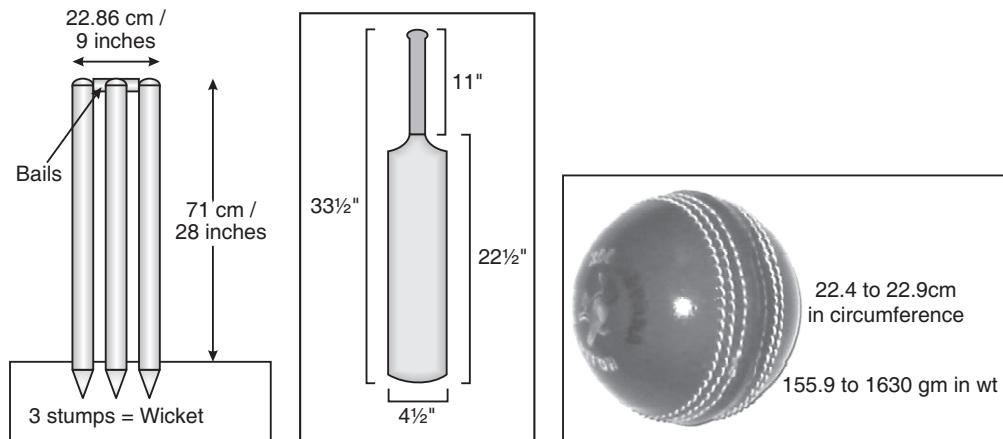
- The game strategy begins when the toss winning captain considers the state of pitch and decides whether to field first or bat first. Generally, a cricket pitch is best for batting initially as it wears out with the play. A moist pitch helps fast bowlers to get the batsman out in early conditions.
- In day/night matches, it is not preferred by captains to play in floodlights so they bat first. If the weather is expected to get moist in the later day, the captain should make a strategy because moisture makes outfield slow to score, difficult to bowl and field at the same time.
- The captain decides the bowler for each over depending on the following factors:
 - ◆ Time of the play
 - ◆ Age of the ball – new ball helps fast bowlers
 - ◆ Bowling style and skills of bowler
 - ◆ Pitch state – dry, crumbled and dusty pitch helps spin bowlers
 - ◆ Game strategy whether taking wickets or preventing runs seeks importance
 - ◆ Weather condition
- The six balls of the over should be thrown tactically and differently by fast and spin bowlers to get the batsman out.
- The type of field is decided by captain depending on the bowling tactics. The attacking field is applied to take wickets whereas a defensive field prevents runs.
- The batting order of the team should be initially arranged in best batting ability to the poor batting ability. At any time during the match, the batting order can be tactically changed to get benefitted under certain situations.
- While facing a ball, the batsman should make a tactical decision on the type of shot to be played by shifting

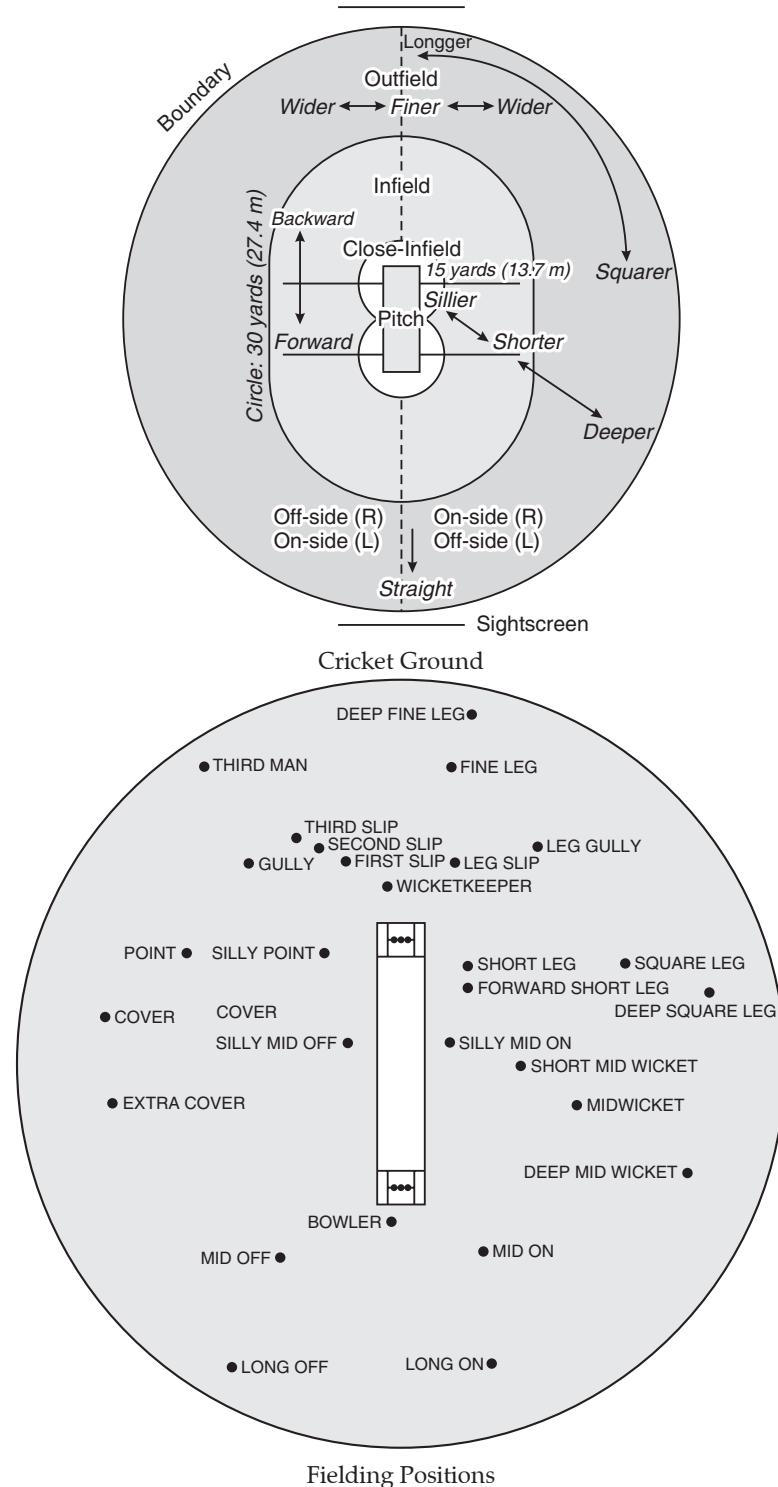
himself towards front foot or back foot.

- The strategic decisions can be taken by captain on follow-on and declaration of innings.
- **Bowling:** After every over, the bowing end changes. The batsman do not change sides but the umpires change their position from behind the wicket to square leg and vice-versa
- **Team:** A balanced team has 5 to 6 specialist batsman, 4 to 5 specialist bowlers and 1 to 2 all-rounders. The wicket-keeper is generally a specialist batman as he cannot bowl during fielding.
- **Fielding:** The wicket-keeper wear special gloves and pads on his lower legs. The captain places the field in consultation with the bowler. A fielder who gets injured during the match can be replaced by a substitute. Such a substitute can neither bowl nor act as wicket-keeper/captain.
- **Batting:** There can be only two batsman on the pitch at any given time. Batting order is decided by the captain. An injured batsman who returns back is considered not-out. He cannot be replaced by substitute but can resume playing later on during the match when he recovers.
- **Runs:** A manual run is completed when both the batsman exchange sides and cross the crease either by their bats or by their bodies before the ball is returned by the fielder. A boundary (ball crossing the outer circle of the ground after touching the ground at least once) adds 4 runs to the score and a sixer (ball crossing the outer circle of the ground without touching the ground) adds 6 runs to the score. No-ball and wide-ball each add 1 run to the score without the ball being counted as a valid delivery. Runs can also be taken on overthrow (a situation when a fielder returns the ball to the fielders at the pitch but the ball does not get collected there and crosses the pitch area).
- **Extras:** The runs scored on account of no-ball, wide-ball, byes, leg-byes are called extras. These are not added to the individual score of the batsman but are added to the team score.
- **Methods to dismiss a batsman:**
 - **Bowled:** A situation when the ball touches the stumps behind the batsman and dislodges atleast one of the bails.
 - **Caught:** A situation when the ball touches the bat and is collected by a fielder without any bounce of the ball on the ground.
 - **LBW:** It stands for Leg Before Wicket. It is a situation when ball is going to hit the stumps but is stopped due to interruption by any body part of the batsman
 - **Run Out:** A situation when a fielder throws ball towards wickets and wicket falls down while the batsman is outside the crease. This usually happens when batsman is trying to take a run and fielder hits a direct throw on the wickets to make it fall.
 - **Stumped:** A situation when a batman misses a ball but steps out of the crease, the wicket-keeper collects the ball and hits the stumps
 - **Hit-wicket:** A situation when a batsman dislodges the bails with his bat, clothes or body while trying to hit the ball or taking a run
 - **Double-hit:** A situation when a batsman hits the ball twice other than to protect his stumps
 - **Handling the ball:** A situation when a batsman intentionally uses his hand to prevent the ball from hitting the stumps
 - **Obstructing the field:** A situation when the batsman intentionally gets in way of the fielder.
 - **Time-out:** A situation when the next batsman does not come to the ground within 3 minutes of dismissal of the previous batsman.
- A batsman cannot be declared out as bowled, caught, LBW, stumped or hit-wicket on a no-ball. A batsman cannot be declared out as bowled, caught, LBW or double-hit on a wide-ball.
- Only one batsman can be dismissed at one delivery.
- **Innings:** The collective play of all the batsman of one side or completion of maximum bowling overs of one side. A match can have one inning per team in case of 20-20 match or one-day match and two innnings per team in case of test-match.
- **Completion of the Inning:** An inning is declared as complete when any of the following situation occurs:
 - The batting team is all-out, that is, 10 of the 11 batsman have been declared out.
 - When only one player is left and the not-out batsmen are either injured or retired
 - The maximum number of overs in an inning have been bowled
 - The batting team reaches the winning score
- **Results:** In case the team batting second cannot reach the winning score, the team who batted first is declared winner "by __ runs". In case the team batting second reaches the winning score, the team who batted second is declared winner "by __ wickets".
- **Follow-on:** The team batting first and leading by more than 200 runs in a test-match can ask the other team to continue their second inning after the first.

➤ **Important Dimensions**

- Number of Players in each team – 11 + 5 (Extras)
- Number of Umpires in each match – 2 (On field) + 1 (Third Umpire)
- Number of Scorers in each match - 2
- Length of Bat – 38"
- Width of Bat (at center) – 4.25" or 4.25 inch
- Weight of Ball – 155 g - 156g
- Colour of Ball – Red (for day match), White (for night match)
- Circumference of Ball – 8"-9" inches
- Width of Pitch – 4' 4" or 4 feet 4 inch 10 Feet
- Length of Pitch – 792" 22 yards
- Width of Wickets – 9" inches
- Height of Wicket from ground – 28" inches
- Distance of Stumps from each side – 792" 22 yards
- Time for changing players – 3 minutes
- Time for changing every innings – 10 min
- Radius of inner circle in field – 1078" 30 yards
- Radius of Boundary – 2700" and above 68.58 m
- Length of Crease from stumps – 4' 4" or 1.22 m
- Types of Matches – 1 day, 5 days, and T20





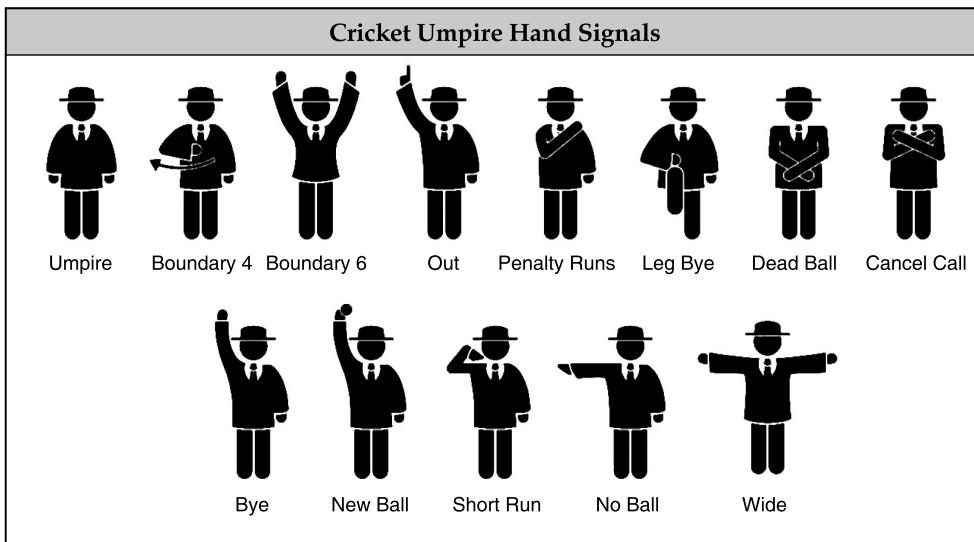
➤ **Duties of match referee:**

- Administer the match by watching it from outside the field
- Does not make any decision about result of Game
- Has power to fine players and team both in form of monetary terms and suspension

➤ **Duties of On-Field Umpire:**

- To take position from where they can easily see the match
- To change ends after each side has one over
- Ensure application of cricket rules in the game and its equipment
- Ensure proper playing conditions like proper ground, pitch, light, etc.

- Regular inspection of ball
- To consult the other Umpire on field or the Third Umpire in case of any doubt
- If the doubt continues, decision is to be given in favour of batsman
- Umpire's decision is final



➤ **Duties of Third Umpire:**

- To watch the match on a television with replay feature to give decision only when consulted by on-field umpires
- To give red light signal when the batsman is out and green light signal when the batsman is not out
- To check no ball non-striker end/cross the line bowler

➤ **Duties of Scorers:**

- Two scorers each representing one team
- To keep an eye on Umpire signals
- To keep record of all match details like number of overs, runs scored, dismissals, etc.

➤ **Duties of Coach:**

- To give written list of players to the umpire before the toss.
- To ensure that play is conducted in accordance with the rules and regulations of the game.
- To motivate players to give their best performance.
- To guide, teach and improve playing techniques of the players.
- To keep check on the health and fitness of the players.

➤ **Game Skills:**

- **Batting:**
 - ◆ **Drive:** An attacking shot hit with a sweeping bat in line of the ball. Depending on the side on which drive is hit, is named as on-drive, cover drive or straight drive.
 - ◆ **Glance:** A shot hit towards the slip area with a minor touch from the bat. Depending on the side on which glance is hit, is named as off-glance or leg-glance.
 - ◆ **Square Cut:** A shot in which the ball is hit with a horizontal bat towards the Gully paint area.
- **Bowling:**
 - ◆ **Swing:** A pace bowling technique in which the ball moves away from the batsman. If the ball swings towards the off side, it is called out swing. If the ball swings towards the leg side, it is called in swing.
 - ◆ **Yorker:** A delivery that is pitched very close to the batsman exactly underneath his bat or on his toes, in the block hole.
 - ◆ **Full Toss:** A delivery that reaches the batsman on the full, i.e. without bouncing under the waist height.
- **Fielding:**
 - ◆ **Close catching:** Close catching require the ability to be able to take quick reaction catches with a high degree of consistency.
 - ◆ **Catching in outfield:** Outfielders have to catch high hit balls that go over the infield. Catching in the outfield need good foot speed to be able to get around the field quickly, and a strong arm to be able to make the 50–80 yard throw.

- ◆ **Long barrier:** This is a fielding skill used to stop the ball in the field .It is used when fielding is far away from the batsman or on uneven surfaces.
- ◆ **Throwing:** Every fielder must be good and accurate at the skill of throwing.

● **Wicket keeping:**

- ◆ The position of wicket-keeper depends on the type of batsman (right handed or left-handed) and the type of bowler (pacer or spinner)
- ◆ The wicket-keeper needs to keep an eye on the ball from the moment the bowler starts running and must rise or fall with the direction of the ball
- ◆ The wicket-keeper must be ready to dive to collect the ball and prevent runs.
- **Century:** The score of hundred or more by the batsman.
- **Sweep:** A shot played on the leg-side with a sweeping motion of the bat and in direction behind the wickets.

➤ **Terminology:**

- **Ball tampering/gouging:** An illegal action in which the condition of the ball is changed by the individual or by the team.
- **Bodyline:** A bowling action in which the bowler aims at the body of the batsman rather than the bat or the wickets.
- **Bump-ball:** A delivery in which the ball touches the ground very near to the place where the shot is hit and bounces off to appear as a catch.
- **Dead-ball:** A situation in which the batsman cannot be awarded runs or declared out due to various reasons.
- **Dot-ball:** A delivery on which no runs are scored.
- **Extra run:** A run which is not awarded to an individual player but to the team on account of bye, leg-ball, no-ball, or wide-ball by the bowling team.
- **No ball:** A delivery which is not delivered as per the rules of cricket.
- **Bouncer:** A pace ball which is short pitched and then bounces above the height of the batsman.
- **Sight screen:** A large screen placed at boundary line which forms the background of the bowler and helps the batsman to see the ball clearly.
- **Beamer:** An illegal delivery that reaches the batsman at around head height without bouncing.
- **Short pitch:** A delivery that bounces relatively close to the bowler.
- **Leg cutter:** A move/turn delivery bowled by a fast or medium-pace bowler with similar action to a spin bowler, but at a faster pace. The ball moves/turns from the leg side to the off side of the batsman.
- **Seam bowling:** A bowling style which uses the uneven conditions of the ball – specifically the raised seam – to make it deviate upon bouncing off the pitch.
- **Innings defeat:** In a two-innings match, if the number of runs scored in its first innings by the side which is batting is greater than the total runs scored by the opposition in both its innings, the result is stated as a win by an innings and number of runs short.
- **Danger area:** The central portion of the pitch, a rectangle running down the middle of the pitch, two feet wide, and beginning five feet from each popping crease.
- **Power play:** A block of overs that in One Day Internationals offer a temporary advantage to the batting side.
- **Declaration:** The act of a captain voluntarily bringing his side's innings to a close, in the belief that their score is now great enough to prevent defeat.

➤ **Skills:**

- **Maiden over:** An over in which no runs are scored.
- **Over:** Six consecutive valid deliveries by a bowler.
- **Appeal:** Shouting at the Umpire by the fielding team to ask if the batsman is out or not.
- **Upper cut:** A shot played against a short ball or bouncer where the batsman makes a cut above his head and the ball usually goes to the third-man area.
- **Pull shot:** A shot played to the leg side on a short-pitched delivery, between mid-wicket and backward square-leg.
- **Off cutter:** An off break delivery bowled by a fast or medium pace bowler which moves into the batsman after hitting the surface.
- **Nick:** A slight deviation of the ball off the edge of the bat.
- **Hook shot:** A shot, similar to a pull, but played so that the ball is struck when it is above the batsman's shoulder.
- **Substitute:** A player able to replace another on the fielding side. A substitute fielder may carry out normal fielding duties but is not allowed to bat, bowl or keep wicket.
- **Late cut:** A cut played as or after the ball passes the batsman's body and is hit towards the third man.
- **Flick shot:** A gentle movement of the wrist to move the bat, often associated with shots on the leg side.

- **Tail-end:** A player who bats towards the end of the batting order, usually a specialist bowler or wicket-keeper with relatively poor batting skills.
- **Cover drive:** A powerful shot generally hit along the ground or sometimes in the air in a direction between cover point on the off side
- **Straight drive:** A powerful shot generally hit along the ground or sometimes in the air in a direction roughly thirty degrees each side of the direction along the pitch.
- **Reverse sweep:** A right-handed batsman sweeping the ball like a left handed batsman and vice versa.
- **Leg glance:** A delicate shot played at a ball aimed slightly on the leg side, using the bat to flick the ball as it passes the batsman, deflecting towards the square leg or fine leg area.
- **Golden duck:** A dismissal for zero from the first ball faced in a batsman's innings.
- **Dead rubber:** A match played in a series when one side has already won the series.
- **Full length delivery:** A delivery that pitches closer to the batsman than a ball pitching on a good length, but further away than a half-volley.
- **Reverse swing:** The art of swinging the ball contrary to how a conventionally swung ball moves in the air; i.e. movement away from the rough side.
- **Overthrow:** The scoring of extra runs due to an errant throw from a fielder. Also known as buzzers. Occasionally used erroneously for any runs scored after a fielder misfields the ball.
- **Night watchman:** A lower order batsman sent in when the light is dimming to play out the remaining overs of the day in order to protect more valuable batsman for the next day's play.

➤ **Governing Bodies:**

- **International Cricket Council (ICC):**
 - ◆ Global governing body of cricket
 - ◆ 12 full members and 93 associate members
 - ◆ Responsible for organisation and governance of cricket's major international tournaments
- **Board of Control for Cricket in India (BCCI)**
 - ◆ National governing body for cricket in India
 - ◆ Richest cricket board of the world
 - ◆ Responsible for organisation and governance of cricket's major national tournaments in India

➤ **Tournaments**

- **National**
 - ◆ Ranji Trophy
 - ◆ Duleep Trophy
 - ◆ Vijay Hazare Trophy
 - ◆ Deodhar Trophy
 - ◆ Irani Trophy
 - ◆ Indian Premier League
- **International**
 - ◆ ICC Cricket World Cup
 - ◆ ICC Champions Trophy
 - ◆ ICC World T20
 - ◆ World Cricket League

CHAPTER-2 FOOTBALL



Revision Notes

➤ **History of Game:**

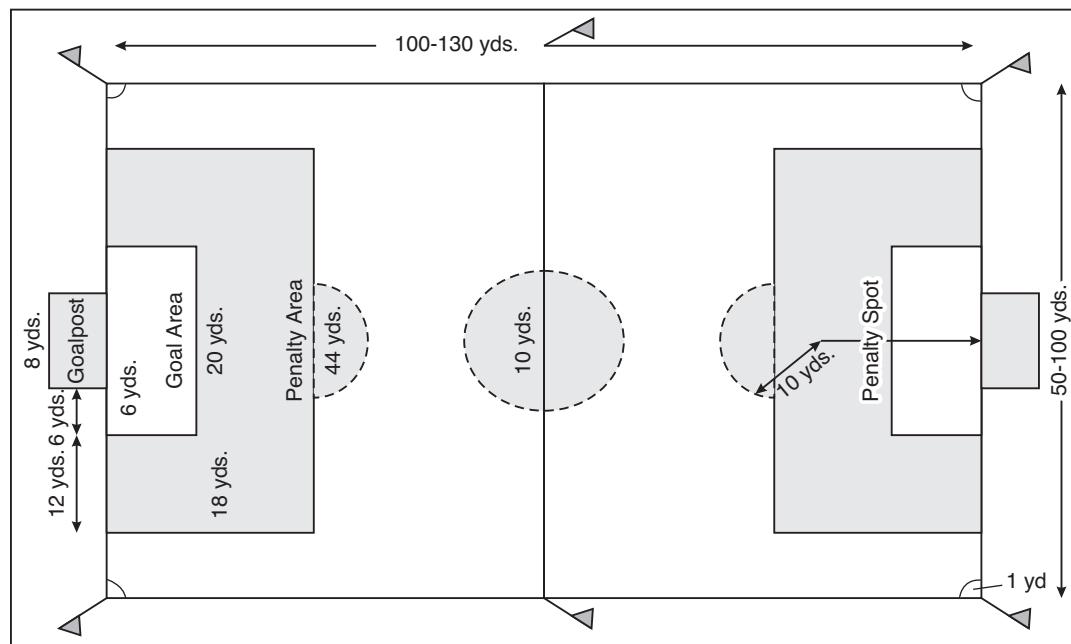
- The game of football was started in Egypt, Rome under the name of 'Harpaston'.
- Around 3000 B.C. to 500 B.C., it developed in China, Japan under the name of 'Tsuchu'.
- From Egypt, its popularity spread to Rome, then to England and Rest of the World.
- The first football competition was held in 1872.
- The first international football match was played between England and Scotland in 1872.
- Federation of International Football Association (FIFA) was constituted in 1904.
- United European Football Association (UEFA) was constituted in 1906.

- Football was included in Olympic Games in 1908.
 - The first World Cup football match of women was held in 1991.
- **Football:** This is a timed game played between 2 teams with eleven players in each team. This game involves two goalposts along the two length-ends and one spherical ball. The teams have to make goals to get more score by throwing the football into the other team's goalpost. Players use their feet, head or torso to hit and strike the football. A goalkeeper can touch the football with hands and arms but within his penalty area.
- **Strategy and Tactics of Football:**
- The strategy of the game is decided immediately after the toss. The captain winning the toss generally chooses the goalpost to defend. This choice is mainly influenced by the condition of the ground and direction of the wind. The goalpost is chosen which is against the direction of wind. The other team starts the match with a kick-off.
 - Preplan the game strategy before the game starts by deciding the formations and positions to be acquired by the players. The strategy can be changed during the play also to adjust with other team's strategy.
 - Pass the football in short passing style and try moving forward with football in triangles.
 - Depending on the skill of players, the offensive or defensive football strategy is followed.
- **Play Field:**
- The longer boundary lines are called touch lines and shorter boundary lines are called goal lines.
 - The half way line divides the center circle in two halves.
 - Flag posts are marked at all four corners of the play field.
- **Goal posts:**
- Always placed at center of goal line.
 - The goal posts are attached to the nets.
 - The goal posts can be made of wood or metal.
 - Goal posts and goal lines must always be in white colour.
- The football can be replaced during the match if its pressure gets reduced, it bursts or becomes shapeless/defective.
- **Start of play:** A coin is tossed. The winning team chooses the goal post and the loosing team starts the match by kick-off.
- **Penalty kick:** Penalty kick is awarded when the players of the defending team commit an offence when the ball is in play in their penalty area. When a penalty kick is awarded, the ball is placed on the penalty mark. The goal keeper of the team committing the offence is allowed to remain at the goal line to prevent the goal. The player from the other team kicks the football and tries to score a goal. All other players of both the teams remain in the play field outside that penalty area.
- **Goal kick:** Goal kick is awarded when the football crosses the goal line outside the goal posts after being kicked by any player of the attacking team. When a goal kick is awarded, the ball is kicked from the goal area of the defending team. All the players of the attacking team are required to be outside the penalty area of the defending team. The only condition is that the person taking the goal kick cannot kick the ball again till the time it has not been touched by another player of any of the teams.
- **Corner kick:** Corner kick is awarded when the football crosses the goal line outside the goal posts after being kicked by any player of the defending team. When a corner kick is awarded, the ball is kicked from the nearest corner flag post. All the players of the defending team are required to be at a distance of at least 10 yards from the concerned corner flag post. The person taking the corner kick cannot kick the ball again till the time it has not been touched by another player of any of the teams.
- **Throw-in:** Throw-in is awarded when the kick from one of the players causes the ball to cross over the touch line. In such case, the player of the other team is required to use both hands and throw the ball over his head into the play field. While taking a throw-in, the feet of the player must be outside the play area or on the touch line at the point where it crosses the touch line. The person taking the throw-in cannot kick the ball till the time it has not been touched by another player of any of the teams.
- **Off-side:** A player is said to be in off-side if the player is in the half of his opponent or near the goal line of the opponent with less than two of the opponent team members in front of him. A player is not said to be in off-side if the player gets the ball due to throw-in, corner kick or goal kick.
- **Direct free kick:** Direct free kick is awarded to the opposing team, when a player guilty of kicking, tripping, pushing, jumping at or spitting at the player of the other team. It is also awarded to the opposing team when any of the player (other than the goal keeper) intentionally touches the ball with his hands.
- **Indirect free kick:** Indirect free kick is awarded to the opposing team when the goal keeper of the defending team holds the football in hands for more than 6 seconds, again handles the ball after releasing it once and before being touched by any other player or plays in a dangerous manner.
- **Score:** A goal is declared when the football crosses the goal line between the goal posts under the crossbar.
- **Result:** The team that scores more goals is declared winner. If each team scores equal number of goals, then extra time of 15-15 minutes is given to both the teams during which the match is resumed. In this situation, the team scoring more goals in the original play along with those scored in extra time is declared a winner. If still the number of goals scored by both the teams is same, the players are asked to score goals by taking kicks from

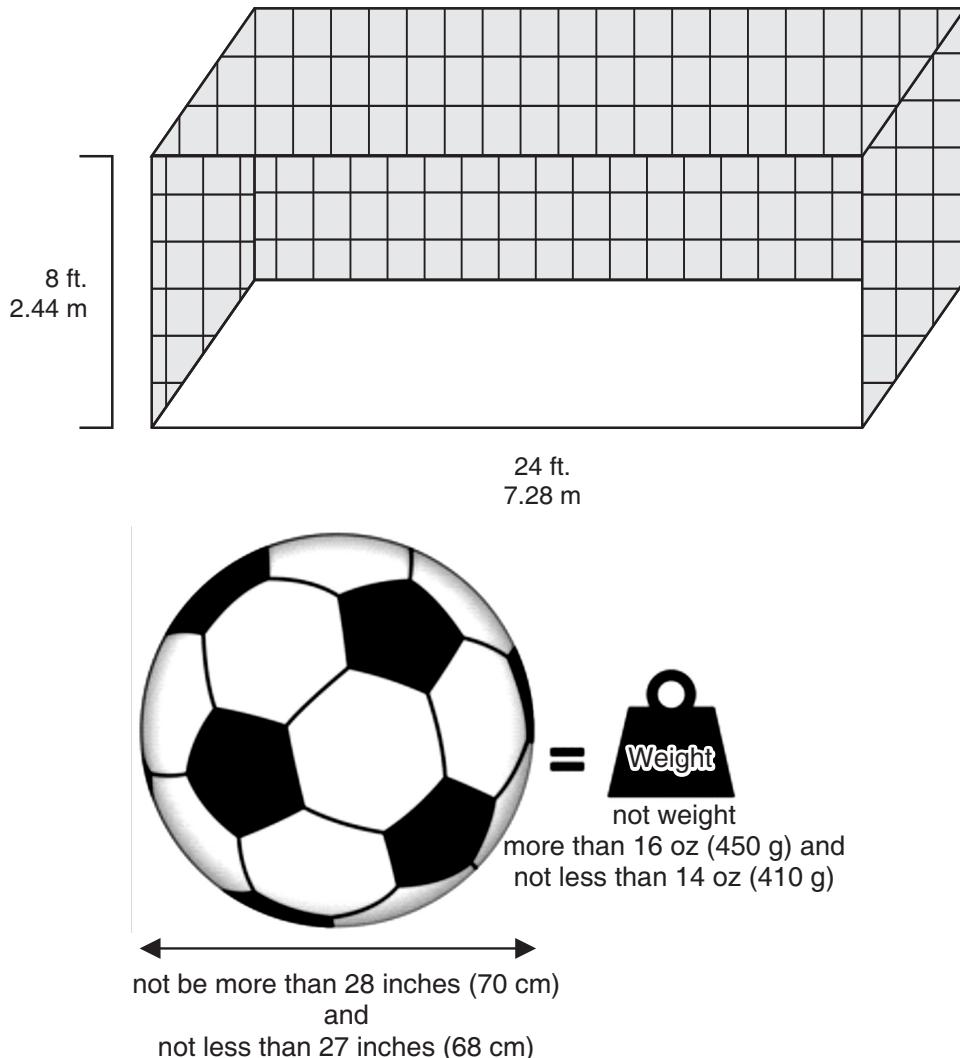
penalty mark. The team score more goals in kicks from penalty mark is finally declared a winner. In case, the number of goals scored from penalty kicks remains same, In this case If both team scores goal first then on the basis of sudden death (1 penalty for each team) the winner is declared.

➤ Important Dimensions:

- Number of players in each team — 11 + 7 (extras)
For FIFA 11 + 11 (extras)
- Number of players that can be substituted in each match – 3
- Number of officials — 4 (1 table official, 1 match referee, 2 linesmen)
- Time duration of match — 2 halves of 45 minutes each
- Time duration of interval — 5 to 10 minutes
- Shape of the playground/playfield — Rectangle
- Length of the playground/playfield — 100 to 130 yards (90 m to 120 m)
- Breadth of the playground/playfield — 50 to 100 yards (45 m to 90 m)
- Circumference of football — 27" to 28" (68.5 cm to 71 cm)
- Weight of football — 14 to 16 ounces (410g–450g)
- Pressure inside football — 0.6 to 1.1 atm (600 to 1100 g/cm²)
- Height of corner flag — 5' (1.5 m)
- Height of Goalpost — 8' (2.44 m)
- Length of Goalpost — 24' (7.3 m)
- Length of Goal area — 60' (18.3 m)
- Width of Goal area — 18' (5.5 m)
- Diameter of Center circle — 30' (9.1 m)
- Length of Penalty Area — 54' (16.5 m)



Football Field



➤ **Duties of match referee:**

- Ensures all the rules are followed during the play
- Ensures the ball and the goal posts meet the prescribed specifications
- Keeps record of the time
- Suspends or terminates the match in case of irregularities during the play
- Punishes the players who intentionally injure the opponents
- Takes opinions of assistant referees in different situations of play

➤ **Duties of assistant referees:**

- Ensure when a player needs to be substituted
- Ensures when a player needs to be penalised
- Ensures that the game stops when the football is out of play
- Decides which team is entitled to penalty kick, goal kick, corner kick or throw-in

➤ **Duties of fourth official:**

- Ensure proper administration of the match
- Replaces another official in case of requirement
- Acts as a point of contact between the match officials and spectators and non-players
- Assesses the players of both the teams
- Ensures that the substitute players enter and replaced players leave the play field according to the specifications.



Offside



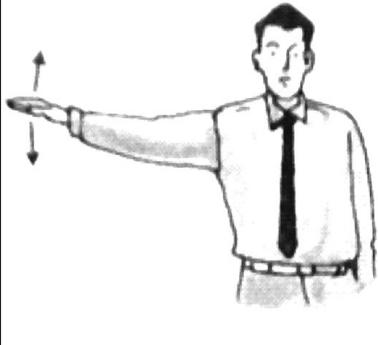
Illegal position or procedure



Illegal Motion or shift



Delay of Game



Personal foul



Roughness and piling on



Clipping



Roughing the kicker



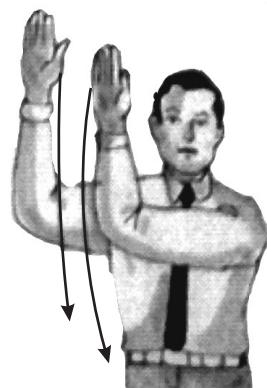
Unsportsmanlike conduct



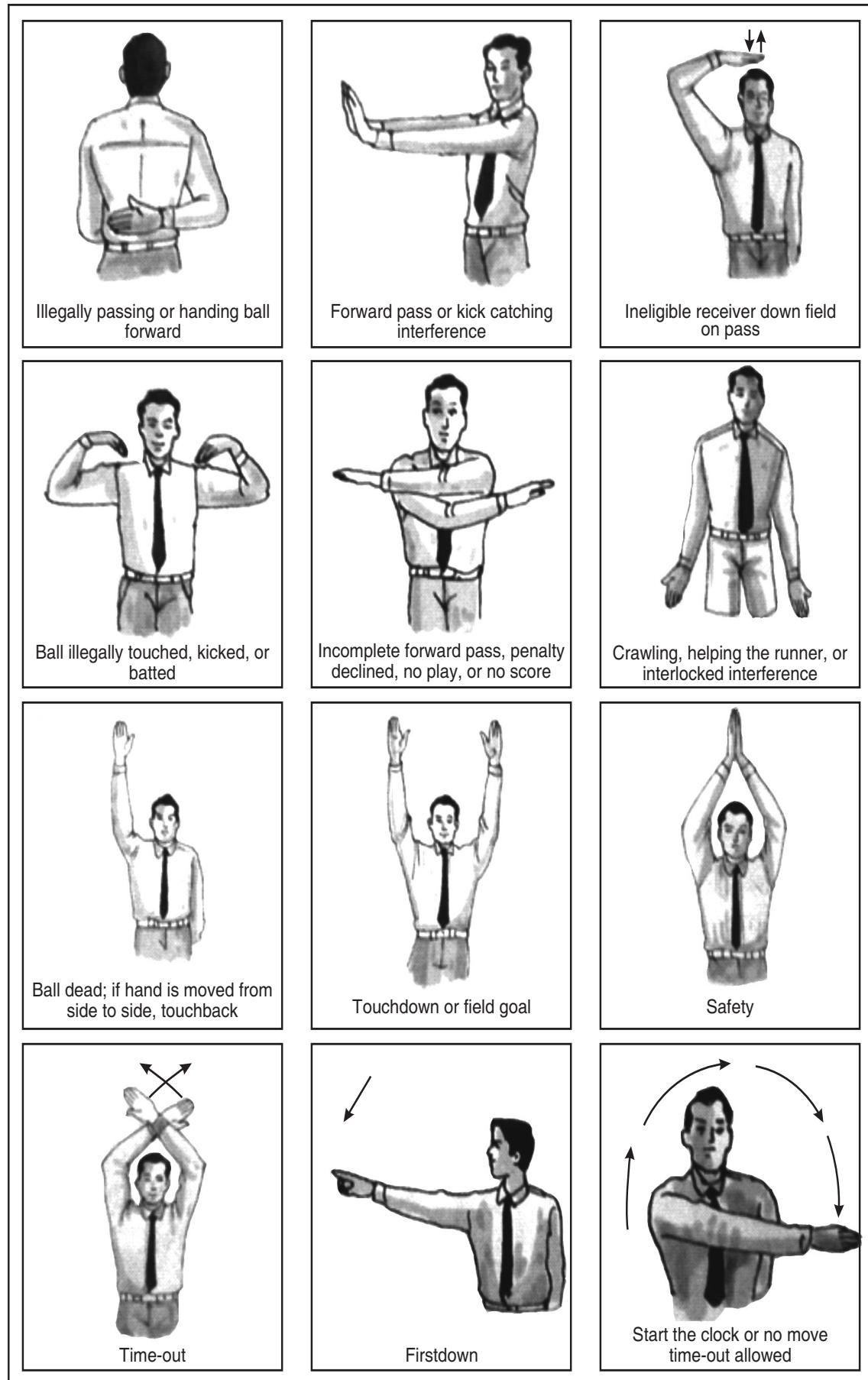
Defensive holding



Illegal use of hands and arms



International grounding



➤ **Game Skills:**

- **Passing - Pass or Passing in football is a skill to give/throw the ball to the teammate.** Pass is of two types: -
 - ◆ **Short pass:** A safe pass executed when one is near the teammates.
 - ◆ **Long pass:** The long pass is used to clear the ball to the opposite side of the field to a teammate who is open and has no defenders around.
- **Trapping:**
 - ◆ **Step trap:** The ball is stepped on to stop it.
 - ◆ **Inside trap:** The ball is stopped with the inside of the foot.
 - ◆ **Thigh trap:** The ball which is higher than the foot but lower than the chest is stopped with the thigh.
 - ◆ **Chest trap:** The ball is stopped with the chest.
 - ◆ **Head trap:** The ball is stopped with the head.
- **Shooting:**
 - ◆ **Instep:** In step kick is used to clear the ball over medium distance. In this, non-striking foot is kept in line with the football and then the football is kicked with the inside of the toe of the striking foot.
 - ◆ **Swerve:** Swerve is a bending shot in which the ball bend in a way to beat the keeper.
 - ◆ **Chip:** It is a kicking technique in which the football is kicked from under high into the air so as to pass over the heads of players of opponent team or to score a goal over the head of the goal keeper.
 - ◆ **Toe:** The ball is hit with the front of the toe without pulling the leg back first to gain momentum.
- **Dribbling:** Dribbling must be done with light strokes to move the ball away from the opponent team members and in direction of the opponent goal post. The player must run in synchronisation with the speed and direction of the football.
- **Heading:** Heading is the skills of hitting the ball with the head. For heading, the player must have an accurate idea of the height and direction of the ball, perfect timing to head the ball exactly at the expected point and excellent sense of direction to turn the ball towards the goal post of the opponent team or preventing the ball from moving in direction of the defending goal post.
- **Tackle:** Tackle is the skills to wrest possession of football from the opponent by using only legs or sliding on the grass to knock away the ball.
- **Goal keeping:** The skills in football to prevent the opponents from getting the ball past the goal line of the team.

➤ **Terminology:**

- **Ball-in:** A situation when the football is inside the play area of the field.
- **Ball-out:** A situation when the football crosses over the boundary lines (even in air) or the match has been stopped by match referee.
- **Advantage** – The “Advantage Rule” or “Advantage Clause” is originally unique to soccer, whereby the Referee has the responsibility to not call an obvious foul if, by stopping play at that moment, the effect would be to cause greater harm to the team that was fouled.
- **Marking** – An organised defensive strategy which aims to prevent a member of the opposing team from taking control of the ball.
- **Sliding tackle:** Slide tackle is the technique to wrest possession of football from the opponent by sliding on the grass to knock away the ball.
- **Man to man:** A defensive strategy where defenders are assigned a specific opposition player to mark rather than covering an area of the pitch.
- **Extra time:** The teams play an extra 15 minutes, called extra time, when the deciding leg (or replay of a tie) has not produced a winner by the end of normal or full-time. The extra time is extended by another 15 minutes, if it remains undecided earlier.

➤ **Skills:**

- **Zonal marking:** A defensive strategy where defenders cover an area of the pitch rather than marking a specific opponent.
- **Quarter circle:** Two imaginary lines 6 m long are drawn from the outside of each goalpost and at right angles to the goal line. At the end of these lines a quarter circle is drawn in the direction of the nearest touch line, each with a radius of 6 m from the outside of the goalpost.
- **Through pass** – A pass sent between two back defenders, or through a gap in the defence, into open space behind the defenders and out of the reach of the goalkeeper.
- **Nutmeg:** To kick the ball between the legs or feet of the opponent.
- **Technical area:** The area which a manager, other coaching personnel, and substitutes are allowed to occupy during a match.
- **Attacker:** The players who keep near the goal of the opponent team and have the responsibility of scoring goals.
- **Cross:** Delivery of the ball into the penalty area by the attacking team, usually from the area between the penalty box and the touchline.

- **Overlap:** Move between teammates. An attacking player (who has the ball) is shadowed by a single defender; the attacker's teammate runs past both players, forcing the defender to either continue to shadow the player on the ball, or attempt to prevent the teammate from receiving a pass. The first player can either pass the ball or keep possession, depending on the decision of the defender.
- **Banana kick:** It is a kicking technique in which the ball is kicked from the center in such a way that it changes direction curve in air before touching the ground.
- **Goal Line Technology:** A system to determine whether the ball has crossed the line for a goal or not.
- **Step over:** A dribbling move used to fool a defensive player into thinking the offensive player, in possession of the ball, is going to move in a direction they do not intend to move in.
- **Half volley:** Pass or shot in which the ball is struck just as, or just after, it touches the ground.
- **Lob:** A lob pass or shot is a pass or shot that is to a player who is at some distance in such a way that it just goes over the head of player against whom you made the lob.
- **Wall pass:** A movement in which one player passes the ball to another and sprints forward to receive the quickly played return.
- **One on one:** Situation where the only player between an attacking player and the goal is the opponent's goalkeeper.
- **Volley:** Pass or shot in which the ball is struck before it touches the ground.
- **Defender:** One of the four main positions in football. Defenders are positioned in front of the goalkeeper and have the principal role of keeping the opposition away from their goal.
- **Bicycle kick:** Move made by a player with their back to the goal. The player throws their body into the air, makes a shearing movement with the legs to get one leg in front of the other, and attempts to play the ball backwards over their own head, all before returning to the ground.

➤ **Governing Bodies:**

- **All India Football Federation (AIFF)**
 - ◆ National Association registered with the Registrar of Societies, Mumbai
 - ◆ Member of FIFA, AFC and Indian Olympic Association
 - ◆ Main objective is to improve and popularise the game of football constantly and promote it throughout India in the light of its unifying, educational, cultural and humanitarian values, particularly through youth and development programmes to urban, rural and remote areas including Schools, College and Universities
 - ◆ Responsibility to draw up regulations and provisions and ensure their enforcement.
- **Federation Internationale de Football Association (FIFA)**
 - ◆ An organisation which describes itself as an international governing body of football
 - ◆ Founded in 1904 to oversee international competition among the national associations
 - ◆ Does not control the rules of football
- **International Football Association Board (IFAB)**
 - ◆ Determines the laws of the game of association football.
 - ◆ Acted as the "guardian" of the internationally used Laws; since its establishment in 1904.
 - ◆ FIFA, the sport's top governing body has recognised IFAB's jurisdiction over the Laws.
 - ◆ Tournaments
- **National**

◆ Santosh Trophy	◆ Subroto Cup
◆ Federation Cup	◆ Durand Cup
◆ I – League	
- **International**

◆ FIFA World Cup	◆ UEFA European Championship
◆ AFC Cup	

CHAPTER-3

HOCKEY



Revision Notes

Concepts Covered : Meaning of Supply , Supply Function , Determinants of Supply.

➤ **History of Game:**

- The game of Hockey is believed to be started in Egypt around instead 2050 of 776 BC as a hockey related picture was found in a Mosque there.
- Some facts point that this game was played by Persians while sitting on horses with long hockey type sticks and a wooden ball.
- From Persians, this game spread to Greece, then to Romans and then it was carried to England.
- Some British writers say that a game played with stick and a ball was popular in England before Christ.
- In 1871, the oldest club by name of 'Teddington' was constituted for hockey.
- The first hockey match was held in 1874 among the Teddington Club and Richmud Club.
- In 1875, the 'English Hockey Association' was formed in London.
- In 1876, 'D' was used first time in a hockey match.
- In 1883, the hockey rules were developed by the Wimbledon Hockey Club.
- In 1886, these rules were recognised by the Hockey Association.
- Since 19th century, the hockey matches are being played on international level.
- The first international hockey match was played between Wales and Ireland in 1895.
- In 1908 and 1920, the game Hockey was included in Olympics.
- In 1924, the 'International Hockey Federation' was established.
- From 1928 onwards hockey is still played in Olympics.
- England is always given credit to popularise this game and is often said its originator.
- In 1885-86, the Britishers established a Hockey Club in Calcutta and started the game of Hockey in India too.
- Some more clubs in Bombay and Punjab were formed later also.
- In 1908 and 1920, the 'Bengal Hockey Association' and 'Sindh Hockey Club' were also established respectively, thus making Hockey popular in India too.
- In 1928, India also participated in Olympics and won a gold medal there.
- In 1958, Hockey was included in Asian Games too.
- In 1971 and 1974 respectively, the World Cup Hockey (Men) and World Cup Hockey (Women) started.
- Australia, India, Germany, Holland, France, Pakistan, England etc. are some of the renowned Hockey Teams of the world.

➤ **Hockey:** This is a timed game played between two teams with eleven players in each team. This game involves two goalposts along the two length-ends, a hockey stick and one ball or puck. The teams have to make goals to get more score by moving ball with the hockey stick into the other team's goalpost.

➤ **Strategy and Tactics of Hockey:**

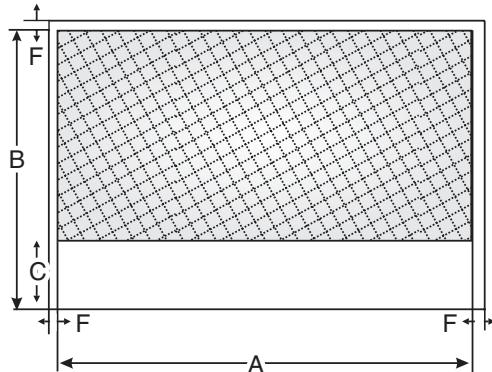
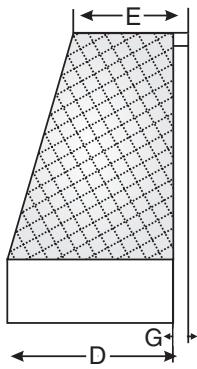
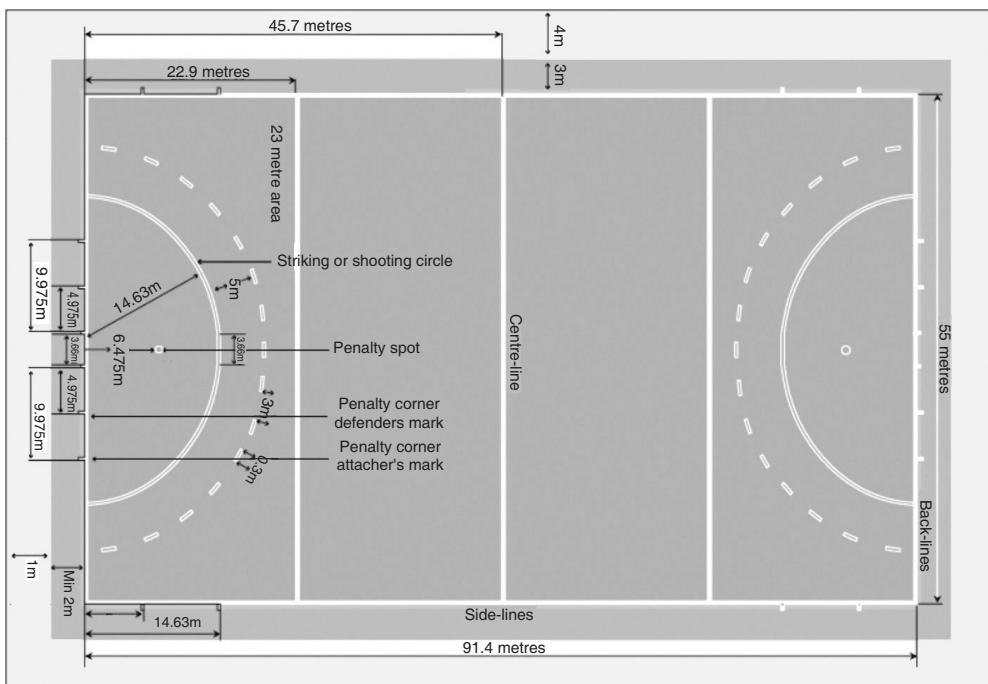
- Strategy is the advanced planning of the game keeping in mind the strengths/weaknesses of one's own team as well as the opponent team.
- Tactics are the on spot review of strategy and necessary changes to it during the actual game play.
- The strategy of game depends on the teams and the playing skills of the team players. But team speed is the basic team building strategy considered now-a-days to win the game, as hockey is becoming a fast sport.
- The strategy of the game is decided immediately after the toss. The captain winning the toss generally chooses the goalpost to defend. This choice is mainly influenced by the condition of the ground and direction of the wind. The goalpost is chosen which is against the direction of wind. The other team starts the match with a center pass.
- Preplan the game plan before the game start by deciding the formations and positions to be acquired by the players. The strategy can be changed during the play also to adjust with other team's strategy.
- Depending on the skill of players, the offensive or defensive hockey strategy is followed.

➤ **Play Field:**

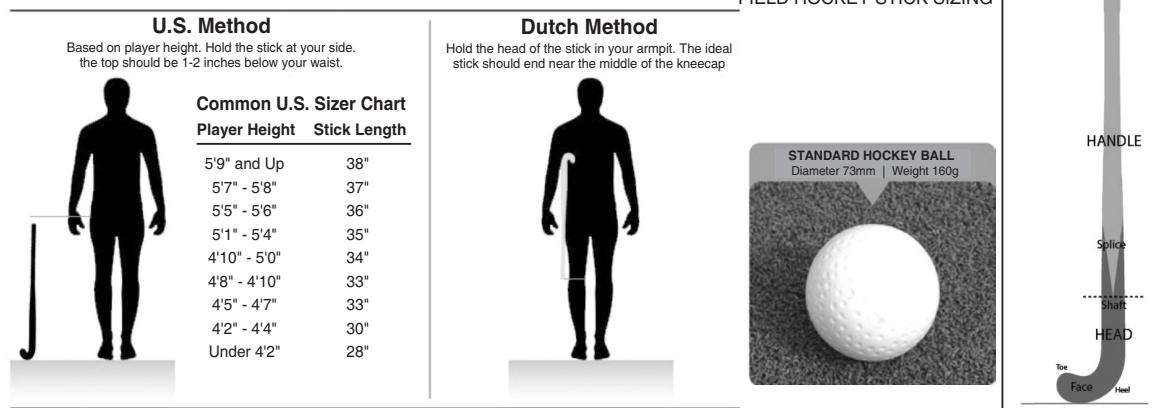
- The longer boundary lines are called sidelines and shorter boundary lines are called backlines.
- The half way line called center line divides the field in two halves.

- Flag posts are marked at all four corners of the play field.
 - All lines are marked in white colour and are 75 mm wide.
- **Goals:**
- Always placed at center of back line outside the field..
 - The goal posts and goal boards are attached to the nets.
 - Goal posts and goal lines must always be in white colour.
- **Team:**
- Players cannot be substituted at the time of taking penalty corner or penalty stroke.
 - Any number of players can be substituted during the match.
 - Substitutes can enter the field once the original player leaves.
 - Match Time is not stopped for substitution of any player except the goal keeper.
- **Start of play:** A coin is tossed. The winning team has the choice to select the goal post for the first half or to start the match with center pass.
- The teams interchange the goal posts during the second half.
- **Rules for center pass:** It is taken from the center of the field and the ball can be played in any direction. The players of both the teams need to be in their respective halves except the player taking the center pass.
- **Rules for Bully:** it is taken at the nearest position of the ball when the match was interrupted. It cannot be taken from within 15 m from the back line.
- **Rules for free-hit:** A free hit is awarded if an offence is committed by a player between the 23 m areas. It is awarded for offence committed by attacking team within 23 m area of the defending team. It is awarded for unintentional offence committed by defending team within 23 m area but outside the circle of the defending team.
- **Rules for penalty corner:** A penalty corner is awarded for an intentional offence by a defender within 23 m area (whether inside or outside the circle) of the side he or she is defending. The result of the offence may not be preventing a goal. It is also awarded when the ball is intentionally played over the back line by a defender. When the ball gets caught up in the equipment or clothes of any defender while in the circle of the side he or she is defending, the attacking team is awarded a penalty corner.
- **Rules for penalty stroke:** A penalty stroke is awarded for an intentional offence by a defender within the circle of the side he or she is defending. The result of the offence must prevent a goal.
- **Ball out of play:** It is a situation when a ball crosses over the back line or side line. The match is restarted by the team other than the team whose player has touched the ball before the ball was out of play.
- If the ball crosses over the side line then the play is restarted at the point where the ball had crossed the side line.
 - If the ball crosses over the back line after being touched last by an attacker, the play is restarted at the point within 15 m from the point where the ball had crossed the back line.
 - If the ball crosses over the back line after being unintentionally touched last by a defender or goal keeper, the play is restarted at the point within 5 m on the side line from the corner nearest to the point where the ball had crossed the back line.
 - If the ball crosses over the back line after being intentionally touched last by a defender or goal keeper, the play is restarted with a penalty corner awarded to the attacking team.
- **Score:** A goal is declared when the ball crosses the goal line between the goal posts after being touched by a hockey stick of any of the players (of attacking as well as defending teams) in the circle.
- **Result:** The team that scores more goals is declared winner. If each team does not score any goal or each team scores equal number of goals, then the match is declared as a draw.
- **Important Dimensions:**
- | | |
|--|--|
| ● Number of players in each team | — 11 + 5 (extras) |
| ● Number of officials | — 4 (2 Umpires, 1 Video Umpire, 1 Match Referee) |
| ● Time duration of match | — 2 halves of 35 minutes each |
| ● Time duration of interval | — 5 to 10 minutes |
| ● Shape of the playground/play field | — Rectangle |
| ● Length of the playground/play field | — 91.40 m |
| ● Breadth of the playground/play field | — 54.86 m |

- Length of Hockey Stick — 41" (105 cm)
- Weight of Hockey Stick — 28 ounces (for men), 23 ounces (for women)
- Circumference of ball — 8" to 9"
- Weight of ball — 5.25 to 5.75 ounces
- Height of Goalpost — 7' (2.14 m)
- Length of Goalpost — 4 yards (3.66 m)
- Height of Goal board — 18" (460 mm)
- Distance of 'D' from end line — 16 yards
- Distance of Penalty Stroke — 7 yards
- Dotted shooting circle — 21 yards
- Depth of the backboard — 4'
- Height of the flag posts — 1.2 to 1.5 m



Goalpost

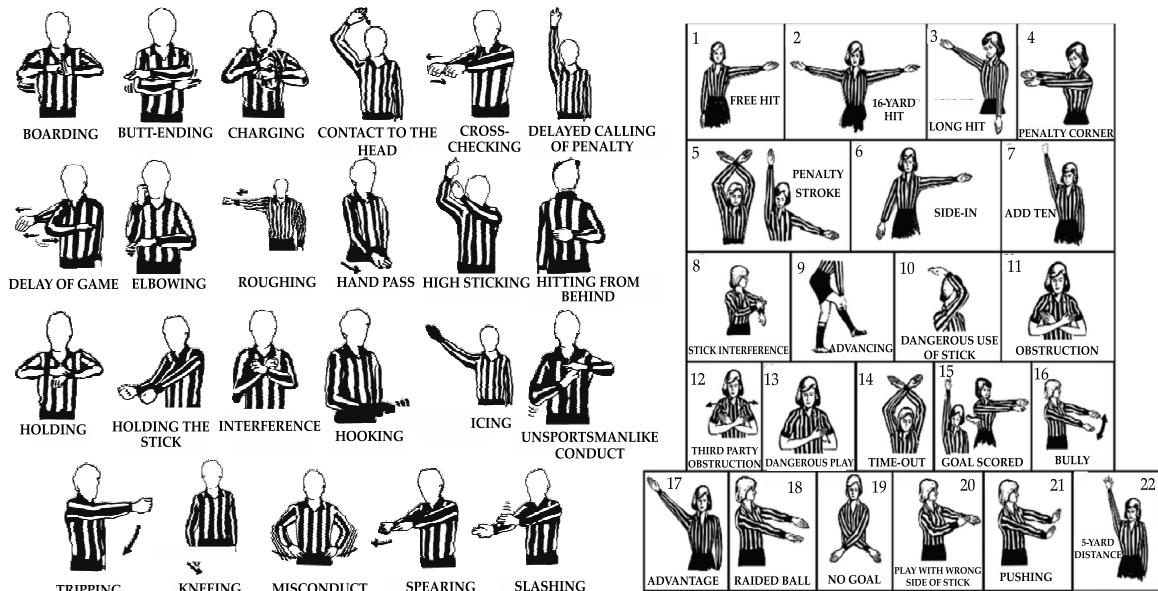


➤ **Duties of a Match Referee:**

- Ensures all the rules are followed during the play
- Ensures the hockey sticks, ball and the goal posts meet the prescribed specifications
- Keeps record of the time
- Suspends or terminates the match in case of irregularities during the play
- Punishes the players who intentionally injure the opponents

➤ **Duties of Umpires:**

- Control the match
- Ensure game is played in accordance with the rules.
- Give unbiased judgment for game played in their half.
- Show different coloured cards for different types of foul.
- Keep a written record of goals scored, goals awarded, warnings, suspensions etc.
- Blow whistle to indicate:
 - ◆ Start of match
 - ◆ Restart of match
 - ◆ Half time
 - ◆ Foul
 - ◆ Penalty corner
 - ◆ Substitution of players
 - ◆ End of match
 - ◆ Stop the match
 - ◆ Goal scored
 - ◆ Penalty stroke
 - ◆ Start a bully



➤ **Duties of Video Umpire:** appointed only in international matches

- Limited to advise whether a goal has been scored or not in accordance with the rules of the game

- Advise only when requested to do so by any of the field umpires or any player of the teams.

➤ **Duties of captain:**

- Wear an arm band or an article on the upper arm to get distinguished from remaining players of the team.
- Responsible for overall behaviour of the players of the team.
- Ensures that game is played with a healthy competition and in fair manner.
- Ensures that the substitution of players is in accordance with the rules.
- Replacement captain (pointed when a captain is suspended from a match) has same duties as that of a captain.

➤ **Duties of Goal keeper:**

- Goalkeeper can participate in match outside of the 23m area in extreme situation.
- To use their hockey stick, feet, legs, leg guards and kickers for stopping the ball and propelling/deflecting it in another direction when the ball is inside their defending circle.
- To use hands, arms and any other body part for stopping the ball and propelling/deflecting it in another direction when the ball is inside their defending circle if the goalkeeper is wearing full protective equipment.
- Should not stand or lie on the ball.

➤ **Duties of players:**

- To use hockey stick for play and not for attacking or defensive purpose.
- Not to hold the stick in a dangerous way.
- Should not touch or interfere with other players, their clothes and sticks.
- To play the ball with the front of the stick only.
- Not to hit the ball if the ball is above the shoulder height of the player.
- Must not intentionally hit the ball high except for hitting while trying to score a goal.
- To keep a distance of 5 m from the opponent when the opponent is trying to receive a falling ball.
- Should not touch, kick, throw or carry the ball with any body part.
- Must not delay the game.

➤ **Game Skills:**

● **Passing:**

- ♦ **Push:** The best way to pass the ball over a distance of about 10m-15m.
- ♦ **Drive:** A hard hit made with the swinging motion of the stick.
- ♦ **Sweep:** A shot played with a sweeping motion of the stick and in the direction behind the player.

● **Trap:**

- ♦ **Upright stop:** A technique to stop the ball with hockey stick in vertical or near vertical position.
- ♦ **Flat stop:** A technique to stop the ball with hockey stick in horizontal or near horizontal position.

● **Dribbling:**

- ♦ **Straight dribble:** The straight dribble allows the player to control the ball best. The ball never leaves the player's stick, allowing him/her to protect it from the grasp of the opponents.
- ♦ **Loose dribble:** The loose dribble is similar to the straight dribble but instead of keeping contact with the ball, the player continually taps it forward while sprinting.

- ♦ **Indian dribble:** The Indian Dribble is one of the most useful dribbles of all. Using a basic grip, the player uses left hand to rotate the stick 180 degrees but keeps right hand loosely in place for control. With the ball and stick in front of the body, the player pushes the ball flat to the left. Rotating the stick again and pushing the ball flat to the right, confuses the opponents.

- ♦ **Dribbling pull back:** The dribbling pull-back is executed together with a straight dribble. As the player straight dribbles, he/she rotates the stick to the front of the ball and pulls back before continuing forward.

♦ **One hand dribble**

- **Right hand:** This dribble only makes use of the right hand and can only be executed if the player is on the right side of the field. Positioning the ball on the right side of the body uses the sideline as another shield for the ball.
- **Reverse side:** This is similar to the one-handed right hand dribble but can be executed only if the player is on left side of the field.

● **Hitting a stationary ball:**

- ♦ Both the hands must be close to each other towards the top of the hockey stick.
- ♦ The grip of the hands on the hockey stick must be tight.
- ♦ The left foot should be at least one foot away and behind the left side of the ball.
- ♦ The elbows must be bent and wrists locked while swinging the hockey stick back before hitting the ball.
- ♦ The ball should be hit hard in the forward direction.

● **Hitting a moving ball**

- ◆ The left foot should be brought as close to the moving ball as possible.
- ◆ The hockey stick should be lifted back before hitting the ball.
- ◆ The ball should be hit hard in the forward direction.

➤ **Goal keeping:** The technique in hockey to prevent the opponents from getting the ball past the goal line of the team.

➤ **Terminology:**

- **Forehand:** Shot taken from front side of the blade
- **Playing Distance:** The distance within which a player is able to play the ball.
- **Tackle:** Technique of stealing the ball from the opponent's player.
- **Back Stick:** Shot taken from back side of the blade
- **Dangerous Play:** Play that could likely result in injury, such as pushing, tripping, or raising the ball at an opponent who is less than five yards away.
- **Obstruction:** Penalty for using the body or stick to prevent opponents from pursuing the ball. "Third party obstruction" is called for blocking an opponent so a teammate can play the ball.
- **Raised Ball:** Flicking, scooping, and chipping the ball into the air are legal. Undercutting or hitting that leads to dangerous play are penalties.
- **Reverse stick:** To turn the stick so that the blade points to the right, allowing a hit or push in that direction.
- **Push:** A type of ball pass which is short and accurate executed in case of time limitation.
- **Scoop:** Method of passing or shooting the ball by leveraging the stick underneath the ball to pick it up and fling it through the air.
- **Advantage Flick:** Pass or shot using the wrists to put force behind the ball to raise it off the ground.
- **High ball:** Shot that make the ball rise above the average waist height of the players.
- **Shooting circle:** The marking on the ground from where the penalty hit is taken.
- **Under cutting:** Penalty for a hard swing of the stick under the ball to raise it into the air.
- **Jab:** To poke continuously at the ball in an attempt to make the attacking player lose possession.
- **Give-and-go:** Passing technique whereby the player passes the ball and then immediately sprints to receive a return pass.
- **Centre pass:** Pass from midfield used to start each half and following all goals.
- **Back pass:** A defensive pass to send the ball backwards to help the attacking team get the offense in place before moving forward on attack.
- **Reverse hit:** Shot played towards own teammates at the back.
- **Rebound:** Situation when the ball bounces off the boards or goalkeeper's equipment.
- **Rusher:** The player who is carrying the ball for an offensive play.
- **Long corner:** A free hit taken from the opponent team's one of the corner flag.
- **Through pass:** When an attacking team player passes the ball between defenders to a teammate.
- **Cross:** Passing the ball in front of the opponent's goal to create a scoring opportunity. Also called "centering."
- **16-yard hit:** Free hit for the defence 16 yards from the goal after an offensive player hits the ball over the end line.

➤ **Governing Bodies**

- **Federation Internationale de Hockey (FIH)**
 - ◆ International governing body of field hockey and indoor field hockey.
 - ◆ Responsible for field hockey's major international tournaments.
- **Indian Hockey Federation (IHF)**
 - ◆ Indian branch of the International Hockey Federation
 - ◆ Apex governing body of field hockey in India.

➤ **Tournaments:**

- **National**
 - ◆ All India Gurmeet Memorial Hockey Tournament, Chandigarh
 - ◆ All India Chhatrapati Shivaji Hockey Tournament, Delhi
 - ◆ All India Indira Gold Cup Hockey Tournament, Jammu.
- **International:**

◆ Sultan Azlan Shah Hockey Tournament	◆ World Hockey Cup
◆ Champions Trophy	

CHAPTER-4

BASKETBALL



Revision Notes

➤ **History of Game:**

- The game of Basketball was started by Dr. J. Naismith in USA in the year 1891.
- This game was originally played by around 40 players of a team in a Gymnasium.
- Initially baskets were fixed on the opposite walls. Every time a goal is scored the ball has to bring manually by climbing up on it.
- The first Basketball game was played by 5 players in each team in January, 1892 after redefining the game rules.
- Continuous efforts were made to change the rules of playing basketball and to include this game in Olympics 1928 and 1932 by American Basketball Training Association.
- In 1932, International Basketball Federation was formed.
- In Berlin Olympics 1936, the game of Basketball for men was included for competition.
- In 1946, the Basketball Association of America (BAA) was formed and the first basketball match was played between Toronto and New York in Canada.
- In 1949, the National Basketball Association was formed.
- In India, the basketball was introduced around 85 years ago by YMCA, Madras (now Chennai).
- In 1950, the Indian Basketball Federation was formed.
- In 1976 Olympics, the game of Basketball for women was included for competition.

➤ **Basketball:** This is a timed game played between 2 teams with five main players in each team. This game involves one spherical ball and two baskets on a hoop and a backboard at an elevation from the ground along the two length-ends. The teams have to shoot the ball through the basket hoops and credit score is awarded on the basis of how and by whom the ball was passed through the hoop. Players dribble the ball and use their fingers to shoot the ball.

➤ **Strategy and Tactics of Basketball:**

- The strategy of the game is decided immediately after the toss. The captain winning the toss has the choice of selecting the basket to defend or take the first shot.
- Preplan the game strategy before the game start by deciding the formations and positions to be acquired by the players. The strategy can be changed during the play also to adjust with other team's strategy.
- Dribble and pass the basketball in short passing style and try moving forward with basketball and shoot baskets from various points.
- Depending on the skill of players, the offensive or defensive basketball strategy is followed.

➤ **Play Court:**

- It is rectangular, flat, hard and levelled, free from any obstructions.
- The boundary lines are in white colour.
- The longer boundary lines are called side lines and shorter boundary lines are called end lines.
- Each end line has a parallel line outside the play court which is called free-throw line.
- The center line divides the center circle in two halves.
- 3-point field goal area – this area includes play court, parallel lines at a distance of 0.90 m of the side lines and a semicircle of radius 6.75 m from the outer edge of the circumference perpendicular to opponent's basket.
- No-Charge Semicircle – area formed by parallel lines perpendicular to the end line and semicircle of radius 1.25 m from the inner edge of circumference from the center of the basket.

➤ **Rules for Substitutes:** A substitute becomes a player and vice-versa when:

- During the play the request is made to the scorer.
- During time out or interval the scorer signals to the referee who then blows the whistle to give the permission.

➤ **Rules for team:**

- A team can have 12 players (including the captain), a coach, an assistant coach and maximum 5 team followers. At any given time during the play, 5 players of each team can be on the play court.

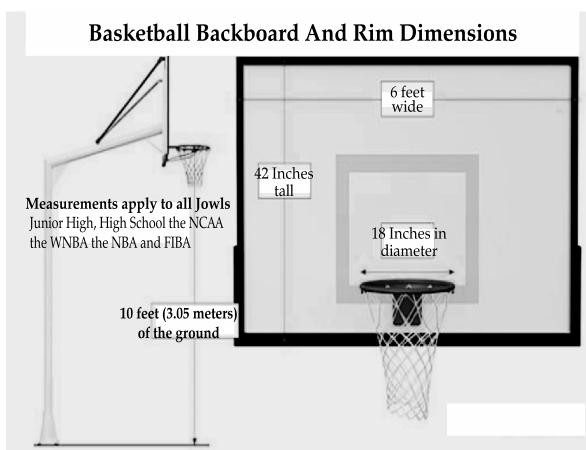
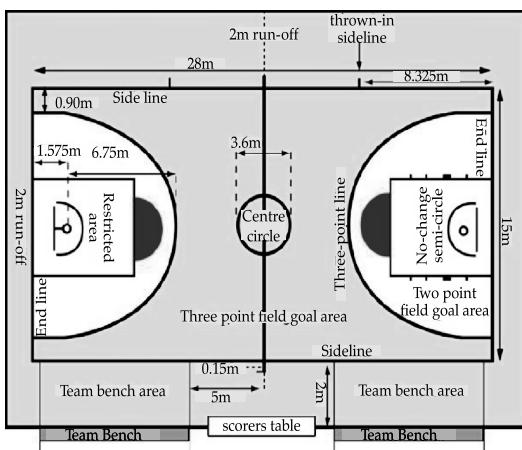
➤ **Rules for Uniform:**

- The Shirts must be of same colour for all the players of a team.

- The Shorts must be of same colour for all the players of a team.
 - The colour of the shorts can be different from that of shirts.
 - The undergarments longer than the shorts are permitted only if they are of the same colour as that of shorts.
 - The shirts must be tucked into the shorts.
- **Rules of Time:**
- There must be interval of play of 20 minutes before the scheduled time of the game and also before each extra period.
 - An interval of play 20 minutes before the beginning of a period and ends with beginning of each period.
- **Start and End of period and game:**
- The first period starts when the jump ball is tapped by the jumper.
 - The subsequent period(s) start when the throw-in ball is tapped by the player.
 - The team named first in the match takes the left bench and the other team takes the right bench.
 - The baskets are exchanged in the second half of the match.
 - In case, the match is extended beyond the fourth period, the baskets are not exchanged and remain same as in the fourth period.
 - The period and game ends with the signal of the official clock of the match.
- **Rules of the Ball used for the game:**
- The ball is called dead when
 - ◆ Free throw has been made
 - ◆ At a signal of official clock of the game
 - ◆ Whistle is blown by an official
 - ◆ At the signal of 24-second device
 - A ball is called live when:
 - ◆ A jump ball is tapped by a jumper
 - ◆ Throw-in ball is tapped by any player
 - ◆ Free-throw ball is at the disposal of free-throw shooter.
- **Goals:** Goal is counted on the basis of credit obtained on ball being put into opponent team's basket. The credit score is awarded as under:
- 1 point if goal is scored from a free throw.
 - 2 points if goal is scored from a 2-point field goal area.
 - 3 points if goal is scored from a 3-point field goal area.
 - 2 points if goal is scored after the ball has touched any of the defending team's players.
 - 2 points if goal is scored by defending team's player accidentally throwing the ball in own basket.
 - No point if the ball enters the basket from below or a foul has been committed by the attacking team's player at the time of goal.
- **Rules for throw-in:** At the time of throw-in, the player taking the throw-in must:
- Release the ball within 5 seconds.
 - Not touch the ball after throw-in before the ball being touched by any other player.
 - Not touch the ball after throw-in but when still outside the boundary lines.
 - Release the ball before entering the boundary line.
- **Rules for time-out:** Time-out is granted when the ball becomes dead and game clock is stopped. The duration of each time-out cannot be more than one minute. The number of maximum time-outs can be two per team (during first half), three per team (during the second half) and one per team (during each additional period). Carry-over of unused time-outs from one period to another period is not allowed.
- **Three seconds rule:** According to this rule, the player must not remain in restricted area of the opponent team for more than three consecutive seconds, if his team has control of the ball in the front court.
- **Eight seconds rule:** According to this rule, whenever a player gains control of the ball, his team must try to move the ball to the front court within next eight seconds.
- **Twenty-four seconds rule:** According to this rule, whenever a player gains control of the ball, his team must try to shoot a goal within next twenty-four seconds.
- **Penalty:** Penalty is awarded on foul by a player. It is in the form of throw-in if the foul is committed to a player who is not in act of shooting and in the form of free throw(s) if the foul is committed to a player who is in act of shooting.
- **Double foul:** A situation when two opponents commit fouls on each other simultaneously or almost at the same time.
- **Important Dimensions:**
- | | |
|--|------|
| ● Number of court players in each team | — 5 |
| ● Number of substitutes in each team | — 7 |
| ● Total number of players in each team | — 12 |

- Number of officials
 - Time duration of game
 - Size of court
 - Radius of center circle
 - Width of Boundary Lines
 - Thickness of backboard
 - Height of Lower end of backboard from floor
 - Circumference of basketball
 - Weight of basketball

- 5 (1 Referee, 1 Umpire, 1 Scorer, 1 Time Keeper, 124-second Operator)
 - 10 min (Play)-2 min (Rest)
 - 10 min (Play) – 10 min (Interval) –
 - 10 min (Play) – 2 min (Rest) -10 min (Play)
 - 28 m X 15 m
 - 1.80 m
 - 5 cm
 - 3 cm
 - 2.90 m
 - 75 to 78 cm
 - 600 to 650 g



Name	Basketball
Size	7#
Item	BGG7X
venues	Wood floors, plastic cement venues
Material	High quality PU, super-butyl liner
Dimension	Standard
Weight	600-650G
Products	Teaching and Training game ball

➤ Duties of match referee:

- Inspects and approves the stop watch, game clock, 24-second device.
 - Inspects and approves equipment of the game.
 - Designates table officials.
 - Selects the basketball for game from atleast two used balls.
 - Directs players to remove dangerous objects from the clothing.
 - Stops game when considers necessary.
 - Forfeits game as he feels necessary.
 - Starts match with jump ball.
 - Approves and signs the score sheet.
 - Records number of fouls in each team.
 - Gives final decision in consultation with the umpire and the other officials.
 - Give decisions on points not specified in rules.

➤ Duties of timekeeper:

- Sets the clock at the beginning of each period.

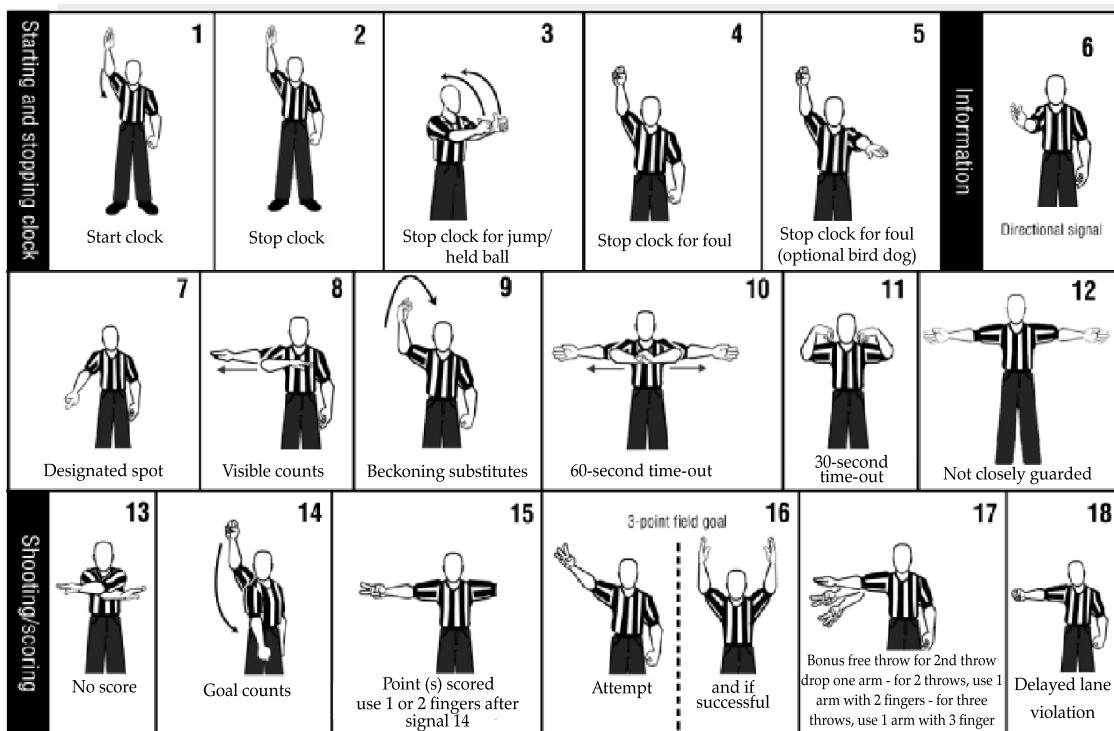
- Starts and stops the clock as and when signalled by the referee to do so.
- Keeps record of team fouls.
- Indicates the period and period number of the game being played.
- Keeps record of score on the clock for both the teams.

➤ **Duties of scorer/assistant scorer:**

- Keeps record of number and names of the players of each team
- Keeps a record of points scored
- Keeps a record of free throws
- Keeps a record of fouls by each player
- Keeps a record of time out and duration of rests and interval
- Keeps records of substitutes
- Makes signals only during the interval when the ball becomes dead and then becomes live again.

➤ **Duties of Captain:**

- Communicates with officials during the game, only when the game clock has stopped and the ball has become dead.
- Informs referee about team's protest to any decision during the game
- Signs scores sheet
- Responsible for overall behaviour of team players during the match.



➤ **Game Techniques:**

● **Dribbling**

- ♦ **High dribble:** The high dribble is used when the player is trying to move the ball up the court very quickly.
- ♦ **Change of pace:** A change of pace dribble is used to cause the defender to lose balance as the player moves the ball forward with a high dribble.
- ♦ **Crossover:** If the defender is making a strong attempt to prevent the player from going right, using a crossover dribble, the player can move to left and vice-versa.
- ♦ **Between the legs:** The between the legs dribble is used to go past a defender who is overplaying the player.
- ♦ **Behind the back:** If the player wants to change directions while keeping a good view of the entire court, a behind the back dribble is used.

● **Passing**

- ♦ **Chest pass:** The ball is passed from one player to another player's chest.
- ♦ **Bounce pass:** A pass that bounces once before reaching the receiver.
- ♦ **Baseball pass:** Passing the basketball using an overhand throw with one hand similar to a baseball pitch.
- ♦ **Outlet pass:** An offensive strategy in which a player who gathers a defensive rebound passes to a teammate

in an attempt to quickly begin the next possession.

- ◆ **No-look pass:** A pass performed when a player looks in one direction but passes the ball to his target in another direction.

● **Shooting**

- ◆ **Layup:** A shot taken close to the hoop, usually when a player is moving toward the basket.
- ◆ **Jump shot:** An overhead shot taken while jumping.
- ◆ **Hook shot:** A play in which the offensive player, usually turned perpendicular to the basket, gently throws the ball with a sweeping motion of the arm farther from the basket in an upward arc with a follow-through which ends over his head.
- ◆ **Free throw:** A free shot given to a player after a foul or a technical foul. The player shoots from the 15-feet free throw line while the rest of the players line up along the outside of the key.
- ◆ **Bank shot:** When a player shoots the ball and it bounces off the backboard and into the hoop.
- ◆ **Slam dunk:** A shot performed when a player jumps in the air, controls the ball above the horizontal plane of the rim, and scores by putting the ball directly through the basket with one or both hands.

● **Defence**

- ◆ **Man to man defence:** A defensive strategy in which each player on the defensive team guards one person on the opposing team.
- ◆ **Zone defence:** A defensive strategy in which players guard a specific zone or area of the court instead of a specific player on the opposing team.
- ◆ **Combination defence:** In the combination defence, two defenders assume strong pass denial positions against designated offensive players. The other three defenders form a triangle zone.

● **Rebounding:** It is the technique in which a ball is followed through:

- ◆ As soon as it rebounds from the rim/ring position to take a jump.
- ◆ Take a jump when the ball reaches the height you can reach with your extended arms.
- ◆ Protect the ball from the players of the opponent time while returning to the ground from the jump.
- ◆ Immediately decide your next action, whether the ball needs to be shot again at the basket or pass to the other teammate.

● **Pivoting:** A technique used to move the body in any direction with one foot firm on the ground and other free in air and in movement with the body. This technique is used for dodging the players of the opponent team.

➤ **Terminology:**

- **Drive:** To get the ball from outside the 3 Point line to the basket for a layup.
- **Fake:** When a player pretends to make one move but actually makes another to trick an opponent.
- **Fast Break:** An offensive action where a team attempts to advance the ball and score as quickly as possible after a steal, blocked shot or rebound.
- **Blocking:** A violation in which a defender steps in front of a dribbler but is still moving when they collide.
- **Charge:** This penalty, which results in a turnover, occurs when an offensive player with the ball runs into a stationary defensive player and knocks him or her over.
- **Carry:** This penalty, which results in a turnover, occurs when a player holds the ball excessively at the apex while dribbling.
- **Screen:** An offensive strategy in which a player without the ball stands in the way of a defensive player. The offensive player must remain stationary during the process, or a moving screen will be called and the result will be an offensive foul and a turnover.
- **Double Dribble:** This penalty, which results in a turnover, occurs when a player dribbles the ball with both hands. It also occurs when a player dribbles, stops dribbling, and then begins to dribble again.
- **Travel:** A penalty, which results in a turnover, where an offensive player moves his or her pivot foot illegally or takes three steps without dribbling the ball.
- **Triple Threat:** A situation when the basketball is being held by the player at hip, right or left, in an athletic stance.
- **Turnover:** When the offensive team loses possession of the ball by way of an offensive foul, steal or out-of-bounds violation.
- **Ball Handler:** A player who controls the ball
- **Dead Ball:** When any of the following situations arises:
 - ◆ Free throw is made
 - ◆ Foul is called
 - ◆ Time out is called
 - ◆ Player injured
 - ◆ Ball goes out of bounds
 - ◆ Violation is called
 - ◆ Held ball
 - ◆ Game clock expires
- **Front Court:** The area of the floor on the offensive side of the half-court line,
- **Loose Ball:** A live ball that is not in possession of either team.

- **Held Ball:** A situation when both the opponent players hold the basketball and neither of them can get possession of basketball from the other. In this case, referee throws up the basketball in air between the two players.
- **Dunk:** To score by putting the ball directly through the basket with one or both hands.
- **Field Goal:** A shot made from anywhere on the court, does not include free throws.
- **Alley-Oop:** When one player jumps and catches a pass from another player and simultaneously dunks the ball or shoots it in before landing.
- **Back Court:** The area of the floor on the defensive side of the half-court line,
- **Press:** A defensive strategy where the defenders guard the opposing team the full length of the court instead of waiting on the opposite side for the offense to come across.
- **Box out:** When a shot goes up, players use this technique, which involves widening their stance and arms and using their body as a barrier to get in better rebounding position.
- **Double foul:** When two opposing players foul each other at the same time.
- **Jump stop:** Offensive footwork used at the end of a dribble, or to receive a pass and be in triple threat position.
- **Time out:** The call made by a team to temporarily stop the game clock and shot clock from ticking.
- **Air ball:** A situation to toss the basketball between the opponent players at the time of starting and restarting the game.
- **Jump ball:** A situation to toss the basketball between the opponent players at the time of starting and restarting the game.
- **Game clock:** The clock that keeps track of the amount of time in the current half or quarter.
- **Block:** A statistic that occurs when a defensive player stops an offensive player from making a shot by blocking the ball with his or her hand(s).
- **Possession arrow:** A physical or electronic arrow at the scorer's table that determines the next possession under the alternating possession rule. After the opening jump ball, it is set to point in the direction in which the team that lost the jump ball is moving on offense, and is switched each time the alternating possession rule is invoked.

➤ **Governing Bodies:**

- **Basketball Federation of India (BFI)**
 - ◆ Governing and controlling body of Basketball in India.
 - ◆ Responsible for the development and promotion of the sport at all levels.
 - ◆ Manages all the national level basketball operations in India.
 - ◆ Involved in organising training camps and national tournaments, and in preparing Indian teams for both men and women international competitions in various age categories.
- **Federation Internationale de Basketball(FIBA)**
 - ◆ An association of national organisations which governs the sport of basketball worldwide.
 - ◆ Defines the rules of basketball, specifies the equipment and facilities required, organises international competitions, regulates the transfer of athletes across countries, and controls the appointment of international referees.
 - ◆ 213 national federations are now members of FIBA.

➤ **Tournaments:**

- **National**
 - ◆ Youth National Basketball Championship
 - ◆ Federation Cup Basketball Championship
 - ◆ UBA Pro Basketball League
- **International**
 - ◆ FIBA World Championship
 - ◆ European Basketball Championship
 - ◆ FIBA Asia Championship

CHAPTER-5

VOLLEYBALL



Revision Notes

➤ **History of Game:**

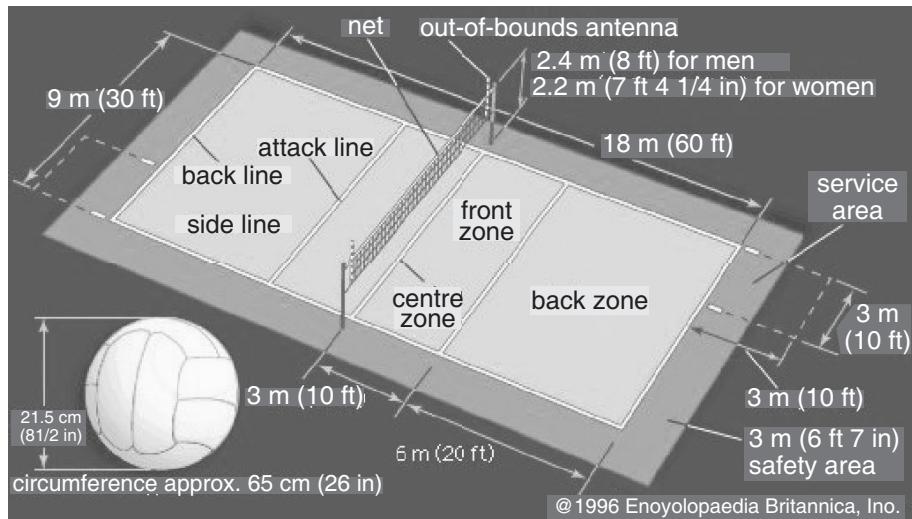
- In 1895 AD, the game of Volleyball was started by William G. Morgan in a Gymnasium of YMCA, America with the name mintonette.

- Volleyball is a simple game to play that requires very less investment.
 - In 1900, Canada became the first country outside USA which started playing volleyball. In 1905, Cuba also started playing it.
 - In 1922, the YMCA, New York, organised the first National Volleyball Championship. The rules for the game were defined by YMCA, USA.
 - In 1928, US Volleyball Association was formed and USA started organising the National Volleyball Championship every year.
 - In 1947 AD, International Volleyball Association was formed.
 - In 1949, the International level first Volleyball Championship was organised at Prague, Czechoslovakia.
 - In 1950, the Volleyball Federation of India was established.
 - In 1952, the first National Championship for men was organised in Madras (now Chennai).
 - In 1953, the first National Championship for women was organised in Jabalpur.
 - In 1955, the first Asian Volleyball Championship was held at Tokyo, Japan.
 - In 1964, Volleyball was included in Tokyo, Olympics for both men and women.
- **Volleyball:** This game played between 2 teams with six players in each team. This game involves one spherical ball and a net placed vertically over the central line. The teams have to hit the ball with their hands or arms across the net and credit score is awarded on grounding the ball on the other team's court. The match generally lasts between 60 - 90 minutes, and continues until a team wins 3 matches.
- **Strategy and Tactics of Volleyball:**
- The strategy of the game starts with matching strategy to the skill level of the team players.
 - The captain winning the toss has the choice of serving, receiving or picking a side to play on. The strategy of play depends on winning or losing the toss.
 - Various tactics should be developed for appropriate serving, receiving, defence, offense and hitting.
 - A good serving requires accuracy, power and variety while hitting.
 - Depending on the team skills, use different 'W' or 'U' formations for offense.
 - Defensive strategy works well with good communication skills during the play.
- **Play Area:**
- It is rectangular, flat, hard and levelled, free from any obstructions.
 - The surface must not be rough and slippery.
 - The boundary lines are in white colour.
 - The longer boundary lines are called side lines and shorter boundary lines are called end lines.
 - The center line divides the play court in two halves.
 - The play field is divided into five zones:
 - ◆ **Front zone:** The area between the center line and attack line
 - ◆ **Back zone:** The area between the attack line and end line
 - ◆ **Substitution zone:** The area formed by extension of attack lines on both sides of the front zone.
 - ◆ **Service zone:** The area formed by extension of side lines on both sides of the back zone.
 - ◆ **Libero Replacement Zone:** The area formed by extension of attack lines and back lines on both sides of the back zone.
- **Measurement of Net Square :**
- Each extreme end has holes at top and bottom to tie the net to the posts and keep the upper and lower parts of the net taut.
 - Two white bands are attached vertically over the sidelines
 - Two antenna of cylindrical shape and made of fiber glass are attached on top of the net.
 - The posts must be cylindrical in shape and fixed to the ground.
- **Team:**
- A team can have 6 players, 6 substitutes, 1 coach, 1 assistant coach, 1 trainer and 1 doctor.
 - The names of captain and libero must be mentioned on the score sheet.
 - Once the names of the players mentioned on the score sheet are signed by the coach and the team captains, the players cannot be changed.
 - The substitutes may warm-up or sit on team bench and not roam here and there.
- **Equipment:**
- A player can wear jersey, shorts, socks and sports shoes.
 - The colour of jerseys and shorts of all players of a team must be uniform.
 - The shoes must be without heels.
 - The jerseys must be numbered for all.

- **Start of match:** First the toss is carried. The captain winning the toss has the option to choose the side of play court or make the first service.
- **Rotation:** It is the change in arrangement of players in clockwise direction till the side has the right to serve.
- **Rotational foul:** It is the fault committed by non rotation of players by the serving side
- **Rules while playing at the net:**
 - A player may touch the ball beyond the net in air if it does not interfere with the play of the other team
 - A player may penetrate below the net in opponent's area if it does not interfere with the play of the other team. If it interferes with the play of the other team, the Penetration fault is said to be committed by the player.
 - A player may get in contact with the net if it does not interfere with the play of the other team
- **Rules of Libero:**
 - Can replace any player in back zone
 - Cannot serve or block
 - The ball cannot be directly passed to the other team by the libero
 - Cannot be substituted until injured during a match
- **Rules of substitution:**
 - A libero can be substituted
 - The scorer must be informed prior to substitution
 - The substitution must be pre authorised by the referee
 - There can be only six substitutions per team for the entire match
 - In case a player gets injured after a team has already made six substitutions, such player can be substituted as Exceptional Substitution
- **Score:** a point is awarded to a team when
 - Ball touches the ground of the opponent's play court
 - The opponent team receives a penalty
 - Opponent team commits a foul
- **Faults:**
 - A fault is committed when the game is not played in accordance with the rules.
 - If more than one fault are committed in succession, only the first one is counted.
 - If more than one fault are committed simultaneously, a double fault is counted.
 - A fault is committed when
 - ◆ Team cannot serve successfully over the net
 - ◆ Ball is stopped, thrown or carried over the net
 - ◆ The players/server steps over the boundary line
 - ◆ The ball is touched by more than 3 players consecutively of the same side
 - ◆ The center line is crossed by any player or the body part of a player
- **Result of a set:** In case of the first four sets, a set is won by the team who first scores 25 points. In case both the teams have scored 24 points each, then the set continues till one team is ahead of the other by two points.
- **Result of a match:** a match is won by the team who first wins 3 sets. In case, both the teams have won 2 sets each then the fifth set is played only for 15 points and is won by the team who wins that set by at least 2 points.
- **Important Dimensions:**

● Number of players in each team	— 6
● Number of substitutes in each team	— 6
● Number of officials	— 7 (2 Referees, 1 Scorer, 2 to 4 Linesmen)
● Size of play field	— 18 m × 9 m
● Width of Boundary Lines	— 5 cm
● Circumference of ball	— 65 to 67 cm
● Weight of ball	— 260 to 280 g
● Colour of the ball	— Multicoloured
● Size of net	— 9.5 m × 1 m
● Size of net mesh	— 10 cm × 10 cm
● Height of net from ground	— 2 m 43 cm (for men) 2 m 24 cm (for women)
● Length of antenna	— 1.8 m
● Distance of pole from sideline	— 50 to 100 cm
● Length of service area	— 9 m

- Size of marks on chest and back of T-shirts — More than 15 cm × 10 cm



VOLLEYBALL NET HEIGHTS

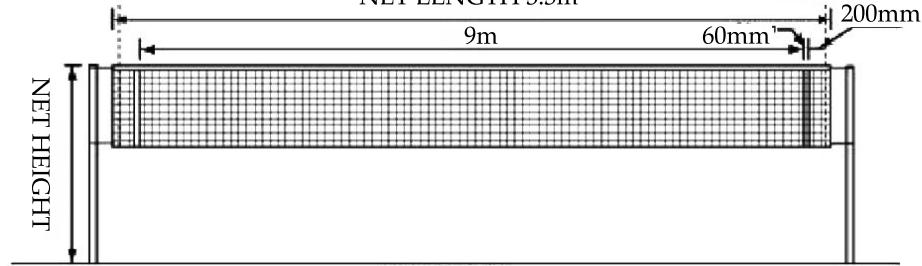
MEN 2.43m

WOMEN 2.24m

BOYS (10 - 15yrs) 2.35m

GIRLS (13 - 16yrs) 2.15m

NET LENGTH 3.5m



PLAYING SURFACE

➤ **Duties of Coach:**

- Conducts behaviour of match and team outside the playing court.
- Contacts second referee for any information.
- Checks names and numbers of players of the team on score sheet
- Signs the score sheet.
- Sits on team bench on side nearest to the scorer.

➤ **Duties of Captain:**

- Before the match**
 - Signs the blank score sheet
 - Represents the team at the time of toss
- During the match:**
 - When the ball is out of play, only the captain must communicate with the officials.
 - Seeks explanation on rules
 - Submits questions submitted by other players of the team to the officials.
 - Asks authorisation for change of equipment, verification of ground, net, ball, etc.
 - Verifies position of the team
 - Requests time-outs and substitutions (in case the coach is not available).
- End of match:**
 - Thank the referees
 - Signs the score sheet

- ◆ Record official protest on the score sheet

➤ **Duties of First Referee:**

- Stands on a platform at one end of the net to have a clear view of the game
- Blows the whistle to start and end the match
- Overrules decision of other officials in case of ball is in play, dead, scored, or happening of double foul, side out and other penalties.
- Stops play on requests of time-out
- Final authority for interpretation of rules

➤ **Duties of Second Referee:**

- Stands on the other end of the net opposite the first referee
- Assists the first referee for decisions related to
 - ◆ Crossing of center line
 - ◆ Net violations
 - ◆ Illegal rotations
 - ◆ Keeping record of time

➤ **Duties of scorer:**

- Seated on the same side of second referee
- Keeps control of and operates the official scoring devices

➤ **Duties of Line Judges:**

- Stand on the two corners opposite the service corners and outside the play court
- Signal the first referee for
 - ◆ Landing of ball (both inside or outside the boundary)
 - ◆ Foot fault by the server
 - ◆ Foot fault by any other player
 - ◆ Passing of ball over or outside the antenna
 - ◆ Touching an overhead object by the ball

➤ **Game Skills:**

- **Service**
 - ◆ **Underhand:** A serve in which the ball is given a slight under-hand toss from about waist high and then struck with a closed fist by the opposite hand.
 - ◆ **Topspin:** The top spin serve dips faster than the float serve and it makes the libero and the defence work for a proper first pass.
 - ◆ **Float:** A type of overhead service in which the ball is hit with no spin.
 - ◆ **Jump serve:** A serve in which the server tosses the ball, takes an approach and jumps to spike the ball.
 - ◆ **Jump float:** A serving technique that puts added pressure on the opponents serve reception.
- **Pass**
 - ◆ **Underarm pass:** A pass with both hands when the height of the ball is below the forehead.
 - ◆ **Overhand pass:** A pass with both hands open that is controlled by the fingers, with the face below the ball. Both hands simultaneously contact the ball above the head and direct it to the intended target.
- **Set**
 - ◆ **Overhead:** A technique of passing the ball in which the player passes the ball to opponent team with the tips of finger held in front of the forehead.
 - ◆ **Bump:** A first hit or pass that is used to set an attack.
- **Attack/spike**
 - ◆ **Back court:** When a back row player attacks the ball by jumping from beyond the attack line.
 - ◆ **Line shot:** A line shot is attacking the ball down an opponent's sideline.



◆ **Cross-court shot:** An individual attack directed across the net at an angle from one side (left side) of the court to the other side (right side) of the court.

◆ **Dip:** Attacking the ball by legally pushing the ball around, through or over blockers.

◆ **Block-abuse:** A defence play by teammates intended to keep a spiked ball in the offense court.

◆ **Off-speed hit:** A controlled spike ball placed in an open area of the court.

◆ **Slide:** Approach that involves a one leg take-off similar to a basketball lay-up.

● **Block**

◆ **Single block:** A defence play by teammates intended to keep a spiked ball in the offense court.

◆ **Double block:** Two players working in tandem to deflect a ball hit close to the net.

◆ **Triple block:** Block formed by all 3 front-row players.

● **Dig—** It is made by a player who makes the first contact with the ball over the net

➢ **Terminology:**

- **Ace:** Points scored on a service that is not returned

- **Ball-in-play:** Starts with hitting of the service
- **Ball-out-of-play:** Starts when a foul occurs
- **Ball-in:** When the ball touches the floor inside the boundary line of the play court
- **Ball-out:** When the ball touches the floor outside the boundary line of the play court
- **Ball touching the net:** It happens when the ball changes the side of play court after touching the upper edge of the net
- **Ball in net:** It happens when the ball touches the net below its upper edge
- **Back row attack:** A back row player attacks the ball.
- **Block assist:** Two or more teammates help block a spiked ball.
- **Side out:** The receiving team is given the serve because the serving team commits an error.
- **Blocking error:** Touching the net, crossing the centerline, blocking a set or serve or any other violation that occurs while making a block attempt.
- **Floater:** A serve with no spin so the ball follows an erratic path.
- **Free ball:** A ball returned on a pass and not on a spike.
- **Joust:** Opposing players volley the ball above the plane of the net.
- **Overlapping:** The rotation of positions of players before the serve.
- **Back set:** A set delivered from behind the setter to an attacker.
- **Carry:** A fault in which the volleyball is held for too long of time in the player's hands.
- **Closing the block:** Teammates close the space between two blockers to prevent the ball from passing between them.
- **Ball down:** The situation when ball touches the ground.
- **Quick set:** An above-the-net strategy in which the hitter anticipates the setter's play and is in the air before the set is executed.
- **Net violation:** A part of the uniform or body illegally contacts the net.
- **Trap set:** A low, tight set close to the net.
- **Cross-court attack:** An attack delivered at an angle across the court from one side of the net to the other.

➤ Skills:

- **Diving:** Technique of playing a ball while falling on the ground
- **Boosting:** Lifting the ball up for smash
- **Booster:** Player who boosts the ball
- **Smash/Spike:** Technique of hitting the ball down towards the opponent team's area
- **Smasher/Spiker:** Player who smashes the ball
- **Server:** Player who serves the ball
- **Block:** Activity to stop the effect of preventing a smash by raising hands from the opponent team
- **Blocker:** Player who blocks the ball
- **Libero:** A special player of the team who can defend but not smash from the attacking area, and wears a different coloured dress from the other players
- **Handling:** Technique of taking control of the ball and passing it to the teammate
- **Round arm service:** A serving technique in which the ball tossed in air is hit by a rotating arm
- **Rally:** Sequence of play actions starting with waiting of service and ending with game going out of play.
- **Ball crossing the net:** It happens when the ball changes the side of play court while in air above the net.

➤ Governing Bodies:

- **Volleyball Federation of India (VFI)**
 - ◆ Governing body of volleyball in India.
 - ◆ Affiliated to Asian Volleyball Confederation.
 - ◆ Headquarters are at Chennai
- **Federation Internationale de Volleyball (FIVB)**
 - ◆ International governing body for all forms of volleyball.
 - ◆ Headquarters are located in Lausanne, Switzerland
 - ◆ Main activity is worldwide planning and organisation of volleyball events,

➤ Tournaments:

- | | |
|---|--|
| <ul style="list-style-type: none"> ● National <ul style="list-style-type: none"> ◆ Indian Volleyball League ◆ Poornima Trophy ● International <ul style="list-style-type: none"> ◆ World Championship ◆ Super Challenge Cup | <ul style="list-style-type: none"> ◆ Federation Cup ◆ World Cup Volleyball |
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CHAPTER-6

BADMINTON



Revision Notes

➤ History of Game:

- An earlier version of badminton play called battledore (earlier name of racket) and shuttlecock was being played at various places of Europe and Asia.
- Before 17th century, some evidences show that the game was played in China too.
- During the 17th century, the badminton was being played at Badminton House in Gloucestershire in England, as per the available evidences.
- In around 1870s, badminton was played in Pune (Maharashtra, India) too. Here, the game was popular with the name of Poonah. The first rules for this game were defined in 1873.
- In 1873, the first badminton club was established in Bath (Folkestone, England).
- Till 1887, the game was played with Pune rules, which were then revised twice by the Bath Badminton Club in 1890.
- In 1893, The Badminton Association of England was formed.
- In 1934, the International Badminton Federation was formed.
- In 1934, the first All India Championship was organised in Calcutta (now Kolkata) along with the formation of Badminton Association of India.
- With increasing popularity of badminton, the World Championship and Thomas Cup was started in 1948.
- In 1957, the Women's Championship and Uber Cup was started.

➤ Badminton:

This game played between 2 individuals or 2 pairs. This game is played with a pair of rackets, a shuttlecock and a net placed vertically over the central line. The player/pairs have to hit the shuttle with their rackets across the net and service change/credit score is awarded on grounding the shuttle in the other team's court.

➤ Strategy and Tactics of Badminton:

- The strategy of the game starts with matching strategy to the skill level of the opponent.
- The player/pair winning the toss has the choice of serving or picking a side to play on.
- Various tactics should be developed for appropriate serving, receiving, defending, smashing and hitting.
- A good serving requires accuracy, power and variety while hitting the shuttlecock.
- The most successful tactic is to hit a shuttlecock in a way and direction which is most uncomfortable to return for the opponent. For example, hitting the shuttlecock across so that the opponent has to run here and there, giving right hand strokes to a left handed opponent.
- The back hand serve must be preferred in comparison to the forehand serve.
- The straight low serve is also a successful serving stroke.

➤ Court:

- It is rectangular, flat, hard and levelled space, which is free from any obstructions.
- The surface must not be rough and slippery.
- The boundary lines are in white or yellow colour.
- Height of posts from surface should be 1.55 m
- Net must be of fine cord, dark coloured, and evenly thick, mesh size should be between 15mm to 20 mm.

➤ Shuttle:

- It may be made up of natural or synthetic material.
- It should have 16 feathers fixed in the base.
- Feather length must be same for all and should be between 62 mm to 70 mm.
- Radius of the circle formed by upper tip of feathers must be between 29 mm to 34 mm.
- A non-feathered shuttle with same dimensions can also be used.
- If a full underhand stroke is made at a upward angle and in parallel direction to sidelines, a correct shuttle must land between 530 mm to 990 mm ahead of the other boundary line.

➤ Toss:

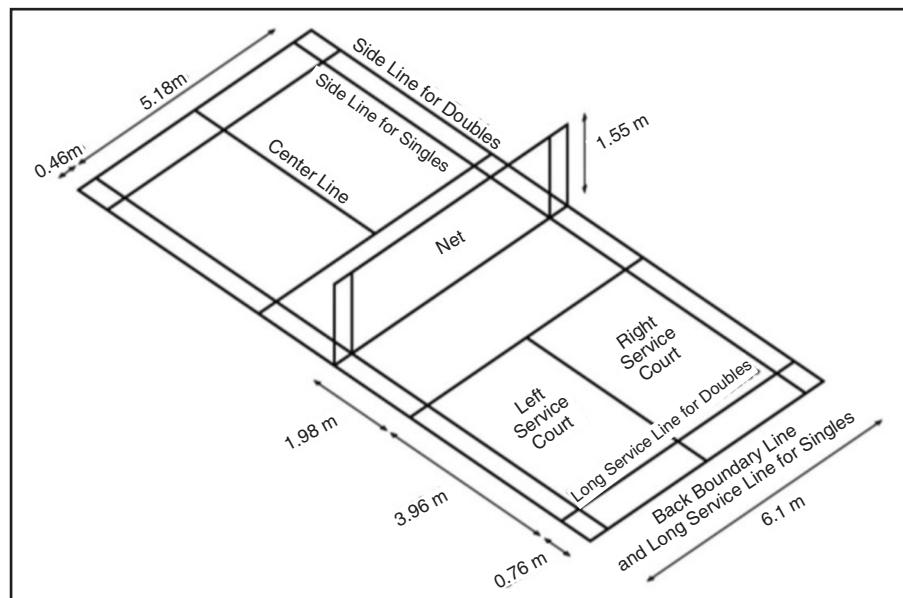
- The player winning the toss has a choice to select between serve and side. The losing side gets the other option.

➤ Score:

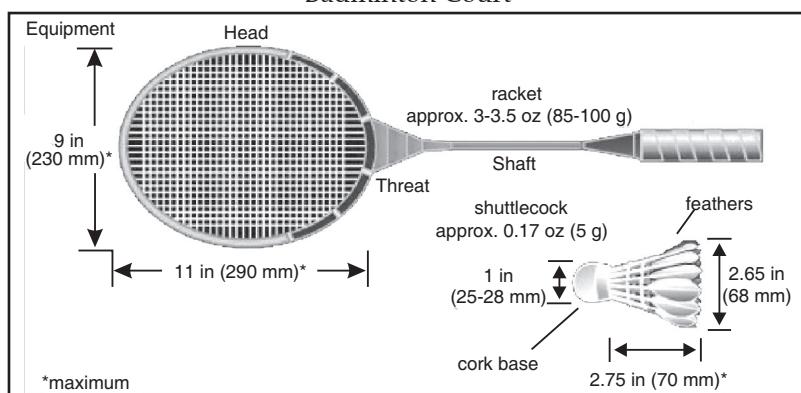
- A match is divided into three games of 21 points each.

- The player who wins 2 out of 3 games is declared winner.
 - Whenever a serving player wins, 1 point is added to the score.
 - Whenever the receiving player wins, the service gets changed.
 - If both the players score 20 points each, the player who first scores two more points wins the game.
 - If both the players score 29 points each, the player who scores 30th point first wins the game.
- **Interval:**
- A one minute interval is allowed when the leading player scores 11 points.
 - A two minute interval is allowed between each game, the sides are changed at the end of each game.
- **Serving errors:**
- This situation happens when a player serves:
 - ◆ Out of turn
 - ◆ On wrong side of court
 - The error upon discovery is corrected and the existing score continues.
- **Fouls:** A fault is committed when:
- The service is not correct.
 - The shuttle gets caught in the net and remains suspended there.
 - The shuttle passes over the net but gets caught in the net.
 - The shuttle lands outside the boundary lines.
 - The shuttle passes under the net.
 - The shuttle passes through the net.
 - The shuttle touches the ceilings.
 - The shuttle touches the side walls.
 - The shuttle touches the player.
 - The shuttle touches the dress of the player.
 - The shuttle gets caught in the racket.
 - The shuttle is hit by the receiver's partner (in case of doubles).
 - The player touches the net or posts.
 - The player enters the opponent's area.
 - The player obstructs the play of the opponent.
 - The player makes gestures, comments or distracts the attention of the opponent in any other way.
- **Let:** A let is a situation in the game that can be called by umpire or any player when the game is intended to be halted.
- **The situation of 'let' arises when:**
 - ◆ Service is made before the receiver is ready
 - ◆ Double fouls are committed simultaneously by both the server and the receiver at the time of service
 - ◆ The shuttle gets caught in the net after a service is returned
 - ◆ If the shuttle completely disintegrates from the base during the play
 - ◆ Any accidental situation
 - In case of let, the score is counted only till the service prior to the service of let.
- **Service:**
- The server and the receiver must stand at diagonally opposite corners of the court.
 - There should not be any undue delay in service.
 - None of the feet of server and receiver shall be fully in air at the time of service.
 - The server must hit the base of the shuttle with the racket while serving.
 - The shuttle must be below the waist height of the server at the time of being hit.
 - The initial direction of the shuttle after being hit by the server must be upwards.
 - The server must not serve till the receiver is ready.
 - The service must be done from right service court if the server has scored even number of points in the game.
 - The service must be done from left service court if the server has scored odd number of points in the game.
- **Important Dimensions**
- | | |
|----------------------------------|---|
| ● Number of players | — 2 (singles), 4 (doubles). |
| ● Number of officials | |
| Service Umpire, 4 to 8 Linesmen) | — 7 - 11 (1 Match Referee, 1 Umpire, 1. |
| ● Size of badminton court | |
| 13.40 m X 6.10 m (doubles) | — 13.40 m X 5.18 m (singles). |
| ● Width of Boundary Lines | — 4 cm. |

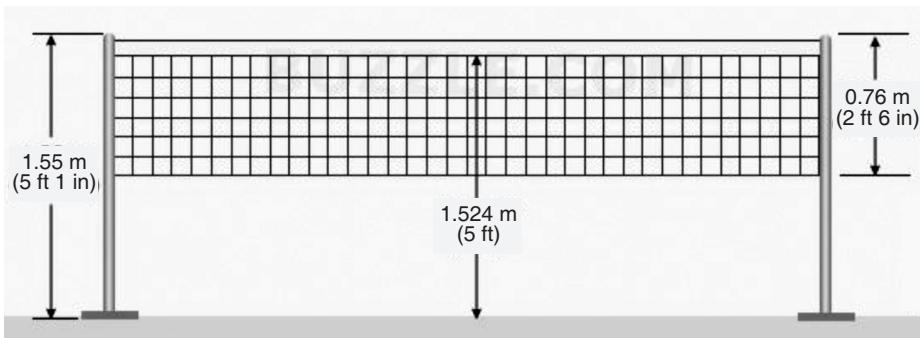
- Weight of Shuttlecock — 4.74 g to 5.50 g.
- Number of feathers — 14 to 16 feathers.
- Length of Racket — 27".
- Weight of Racket — 85 g to 140 g.
- Length of Racket frame — 11".
- Width of Racket frame — 9".
- Width of net — 2' 6".
- Height of net — 5' (from center), 5'1" (from posts).
- Side gallery — 1' 6" on each side.
- Back gallery — 2' 6" on each side.
- Maximum number of sets — 3.



Badminton Court



Racket



➤ **Duties of Match Referee:**

- Over all in-charge of the tournament.
- Ensures that the tournament is conducted in accordance with the rules of the game.
- Ensures that facilities given to the players are adequate.
- Ensures appointment of internal representation.
- Ensures that the number of technical officials appointed for the tournament is sufficient.

➤ **Duties of Umpire:**

- Ensures that the scoring device is correct.
- Ensures adequacy of the net and the posts.
- Ensures fair toss.
- Ensures that the officials are present on their places.
- Keeps the written record of scores.
- Keeps a record of all faults during the game.
- Keeps a record of official warnings issued to players during the game.
- Ensures the stock of tested shuttles is sufficient or not.
- Ensures the game equipment with the players is in accordance with the standards.
- Keeps a record of misconducts during the game.
- Gives decision on appeal or dispute during the match.
- Appoints line judge and service judge in discussion with the referee.

➤ **Duties of Line Judge:**

- Judges whether the shuttle is in or out of boundary lines when it lands on the court.
- The decision of in or out must be declared both verbally and with signals.

➤ **Duties of service judge:** Judges whether service is in accordance with the rules of the game.

➤ **Game Skills**

- The racket can be gripped with forehand or backhand.
- **Forehand stroke:** The stroke in which the shuttle is returned from the right hand side of the player.
- **Backhand stroke:** The stroke in which the shuttle is returned from the left hand side of the player.
- **Drop shot:** A gentle stroke in which the shuttle is aimed to drop immediately after crossing the net.
- **Drive:** A stroke in which the shuttle is returned parallel to the ground.
- **Block:** A defensive stroke to return a smash.
- **Forehand smash:** The stroke in which the shuttle is returned holding the racket from the base of the handle in a forehand grip.
- **Smash:** A stroke in which the shuttle is hit hard in downward direction in an attempt to finish the game.
- **Drop:** A situation when a shuttlecock falls very near to the net in the opponent's court but is still returned by the opponent.
- **Slice Drop:** A type of shot in which the stance of the player makes the opponent expect a smash or straight but is actually delivered a drop shot close to the net.
- **Net Drop:** A type of shot which is played from the court half closer to the net and the shuttle is cleared very close to the net.

➤ **Terminology:**

- **Bird:** A common name for a shuttlecock.
- **Toss/Lob:** A stroke used to send the shuttlecock to the base line of the opponent travelling high up in the air.
- **Rally:** Continuous exchange of valid shots during a game until the shuttle drops on the court.
- **Server:** A person who starts the play by serving the shuttlecock.
- **Side-out:** A situation when a player/pair ends the serve and the service is transferred to the opponent.
- **Match-point:** The final point, the winner of which, wins the match.
- **Carry:** When the shuttlecock does not bounce back immediately after being hit by the racket in an illegal manner.
- **Cross-court:** A situation in which the shuttlecock crosses into the opponent's court diagonally.
- **Foot-fault:** A situation when the foot of any of the player is placed on the ground in an illegal position.
- **Double hit:** When the shuttlecock is hit twice consecutively by the player.
- **Alley:** In a doubles match the court is extended on both sides by 1.5 feet. This extended area is called alley.
- **Backhand Shot:** A type of shot in which the shuttle is hit from the side belonging to the inactive arm. To play a backhand shot successfully, the right foot must be in front and slightly across the body.
- **Love All:** It is a score at which all badminton games begin by the competitors which is 0 – 0 for both the players/pairs.
- **Long Service:** It is a situation in which after service, the shuttlecock lands between the two opposite baselines of the rear court or half court that lies away from the net of the opponent.

➤ **Governing Bodies:**

- **Badminton Association of India (BAI)**
 - ◆ The governing body of badminton in India.
 - ◆ Responsible for holding national-level tournaments in India.
 - ◆ 28 state members that conduct badminton tournaments.
- **Badminton World Federation (BWF)**
 - ◆ International governing body for the sport of badminton.
 - ◆ Recognised by the International Olympic Committee (IOC).
 - ◆ 176 member nations around the world.

➤ **Tournaments**

- **National.**
 - ◆ Indian Open Badminton Championship.
 - ◆ Senior National Badminton Championship.
- **International.**
 - ◆ World Championship.
 - ◆ Thomas Cup.

