

# Physical Education

## Question Paper 2019

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**Maximum Marks: 70**  
**Time allowed: Three hours**

(Candidates are allowed additional 15 minutes for only reading the paper. They must NOT start writing during this time.)

- Answer any five questions from Section A.
  - Section B comprises of one question on each game with five subparts (a), (b), (c), (d) and (e). Select any two games from this Section.
  - Answer any three of the five subparts (a), (b), (c), (d) and (e) from each of the two games selected by you in this section.
  - The intended marks for questions or parts of questions are given in brackets [ ].
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### **Section-A** **(40 Marks)**

Answer any five questions.

#### **Question 1.**

What is meant by warming up? Write the advantages of warming up. [8]

#### **Answer:**

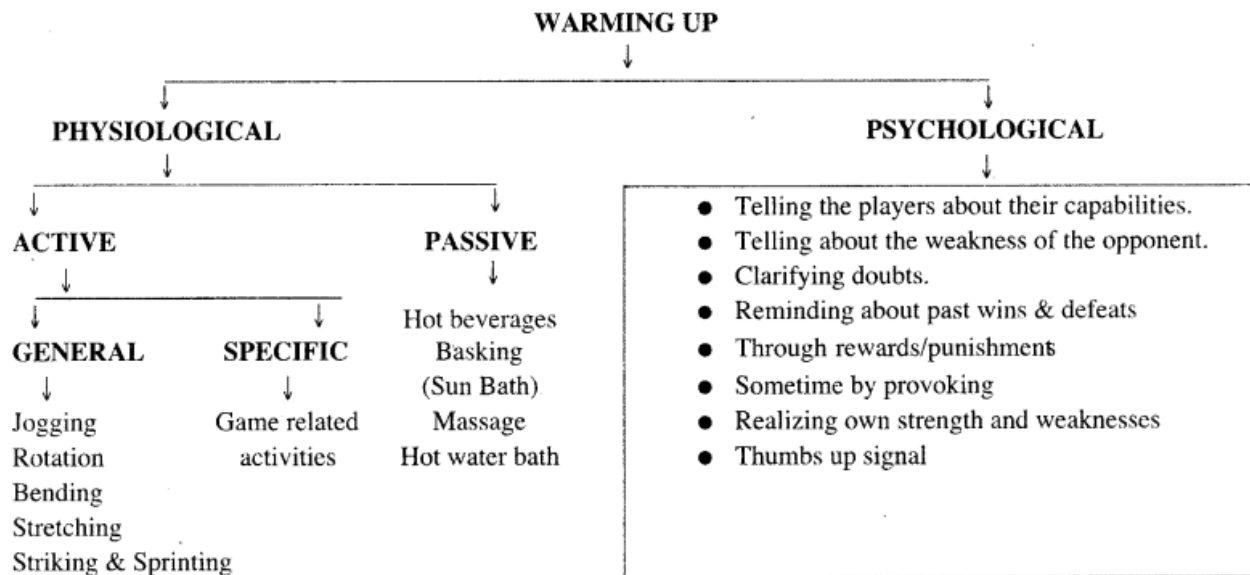
Prevention is better than cure is an age old saying. Injury prevention is one of the best ways to ensure that performance doesn't dwindle or drop. There are many ways of preventing injuries. Warming up and cooling down helps in preventing sports injuries.

Muscle should be warmed up:

- (a) To increase blood circulation.
- (b) To enable oxygen to reach to the working muscle group.
- (c) To increase temperature of the muscle.
- (d) To increase metabolism of the muscle. Warming up can be divided into two types, namely, Physiological warm up and Psychological warm up.

#### **I. Physiological Warm Up :**

In this warm-up a player is prepared physically for the activity. All the systems of the body are



Warming up is preparing the athletes mentally and physically to adjust the sudden increase in the movement. Warming up is a process by which human body is brought to a condition at which it safely responds to the nerve impulses of the person for quick and efficient action. An insufficient warming up may contribute to muscle or tendon injuries. Components of warming up are jogging, running, stretching, calisthenics, flexibility exercise, games, sports or event-related activities.

made ready to bear stress during the activity. Physiological warm up creates following impact on the body :

1. Body temperature is raised gradually which in turn increases the blood supply to the muscles. Warming up enhances the body core temperature. If the core temperature of the body is increased by 1 °C then basal metabolic rate (BMR) is increased by 14% which enhances the physical work capacity.
2. Hemoglobin (RBC) carries more oxygen, which results in more oxygen exchange between blood or tissue and myoglobin.
3. Propagation of nerve impulses (signals) become faster which improves and sharpens the reaction time.
4. Rate of contraction of muscle becomes faster as the viscosity is lowered. Thus the chances of injuries or wear and tear are minimized.
5. Increases the stroke volume as per demand of muscles to be used in the activity.
6. Increases lung ventilation, which supplies more oxygen. It results in the removal of lactic acid which helps in improving the endurance,
7. Improves agility, coordination and range of motion (ROM) in the joints.
8. It helps the athlete to enjoy the second wind at the earliest possible.

II. Psychological Warm Up :

In this warm up athletes are prepared mentally for the activity. It is very important for all games and sports specially combating games like judo, wrestling, boxing etc. Psychological warm up can be started many days before the competition and can be given during the actual competition. It reduces tension and nervousness. It improves the concentration required for the main task.

Through psychological warm up a player is motivated by boosting his or her moral in following ways :

- Telling the players about his or her capabilities.
- Telling about the weakness of the opponent.
- Clarifying his doubts.
- Reminding about his or her past wins and defeats.
- Through rewards or punishments.
- Sometimes provoking him.
- Thumbs up signal.

### **Question 2.**

- (a) Explain the merits and demerits of league tournament. [8]  
(b) Draw a league fixture for eight teams according to cyclic method.

### **Answer 2.**

(a) In a league tournament each team competes with every other team participating in the tournament. Winners are decided on the basis of the points acquired after all the competitions. For each win a team may be awarded 2 points, for draw 1 point and for a loss no point is awarded. Formulae to find the number of matches in a league tournament –  $n(n-1)/2$ , where  $n$  = number of teams participating in the tournament.

For example :

The number of matches in a league tournament of 8 teams =  $8(8-1)/2 = 28$  matches.  
In a single league tournament, every team competes with every other team participating in the tournament once. In a double league tournament, every team competes with every other team participating in the tournament twice.

Advantages of league tournament:

- Luck factor does not have a role to play as each team gets to play with all the teams.
- If a good team has lost a match, it still can be winner of the tournament because it has other matches to play.
- There is less pressure on players to perform well because each match is not crucial.

- More number of matches for players to show their talent and also for the selectors to spot the talent.

Disadvantages of league tournament:

1. It takes more time to finish the tournament. Number of matches in a league tournament is more compared to the knock-out tournament.
2. It is not economical.
3. Each match is not crucial. So, some matches may become boring for spectators, riding to cyclic method

(b) League fixture for 8 teams According to cyclic method

1 Round	2 Round	3 Round	4 Round	5 Round	6 Round	7 Round
8 Vs 1	7 Vs 1	6 Vs 1	5 Vs 1	4 Vs 1	3 Vs 1	2 Vs 1
7 Vs 2	6 Vs 8	5 Vs 7	4 Vs 6	3 Vs 5	2 Vs 4	8 Vs 3
6 Vs 3	5 Vs 2	4 Vs 8	3 Vs 7	2 Vs 6	8 Vs 5	7 Vs 4
5 Vs 4	4 Vs 3	3 Vs 2	2 Vs 8	8 Vs 7	7 Vs 6	6 Vs 5

### Question 3.

Discuss the importance of health education for adult younger generation

#### Answer:

According to National Conference of Preventive Medicine USA, Health education is a process that informs, motivates and helps people to adopt and maintain healthy practices and lifestyle, advocates environmental changes as needed to facilitate this goal and conducts professional training and research to the same end.

Lawrence Green defined Health Education as 'a combination of learning experiences designed to facilitate voluntary actions conducive to health.'

Health education is a social science that draws from the biological, environmental psychological, physical and medical sciences to promote health and prevent disease, disability and premature death through education-driven voluntary behaviour change activities.

Health education is the process by which individuals and group of people learn to promote, maintain, restore health. It is a process aimed at stimulating the wish to be healthy, to know how to stay healthy, to do what they can individually and collectively do to maintain health, and to seek help when needed.

Health education as applied to health and disease issues is a process with intellectual, psychological and social dimensions relating to activities that increase the abilities of

people to make informed decisions affecting their personal, family and community well being. This process, based on scientific principles facilitates learning and behavioural change in both health personnel and consumers, including children and youth.

The purpose of health education is to positively influence the health behaviour of individuals and communities as well as the living and working conditions that influence their health. The focus of health education is on increasing functional health knowledge and identifying key skills that are applicable to all aspects of healthy living. These skills include identifying the influence of family, peers, culture, media and technology on health behavior; knowing how to access and use valid health information and using communication, decision-making, goal-setting and encouragement skills to engage in health-enhancing behaviours.

#### Importance of Health Education for adults :

1. Health education helps adults in personal development, well-being, increased self-confidence, etc.
2. Health education helps in health literacy. The capacity of people to understand how to deal with their health (indications of a doctor, instruction leaflets on medicines, information leaflets on illnesses, etc.) helps in better health of adults.
3. Health education helps adult to have better understanding of the preventive measures and treatment for communicable and non-communicable diseases.
4. Health education helps in promotion of healthy lifestyles. Courses on nutrition or cooking but also yoga and gym classes, etc. help the adults to have healthy concepts for having healthy lifestyle.
5. Helps in promoting the proper use of health services available in adults.
6. By focusing on prevention, health education reduces the costs of adults (both financial and human) that individuals would spend on medical treatment.

#### Importance of Health Education for young generation :

1. Helps in instilling behaviors into young generation to prevent or delay the onset of the leading causes of death.
2. Helps in promoting the proper use of health services available in young generation.
3. Health education builds students' knowledge, skills, and positive attitudes about health. Health education teaches about physical, mental, emotional and social health. It motivates students to improve and maintain their health, prevent disease, and reduce risky behaviors.
4. Health education curricula and instruction help students learn skills they will use to make healthy choices throughout their lifetime. It provides logical reasons for avoiding alcohol, tobacco, and other drugs.

5. It helps to cite the young generation regarding the importance of injury prevention, having good physical and emotional health, proper intake of nutrition, physical activity, prevention of diseases and sexuality and family life.
6. Health education promotes learning in other subjects. In general, healthy students learn better. Numerous studies have shown that healthier students tend to do better in school. They have higher attendance, have better grades, and perform better on tests.

**Question 4.**

Mention the causes and corrective measures for the following ; [8]

- (a) Lordosis
- (b) Flat foot

**Answer:**

(a) Lordosis : Lordosis is a medical term used to describe an inward curvature of a portion of the vertebral column. It is an increased forward curvature in the lumbar region and is the main cause of problems in walking and standing. It can affect the lower back and neck. This can lead to excess pressure on the spring causing pain and discomfort. Lordotic curves refer to the inward curve of the lumbar spine (just above the buttocks).

Causes:

- Birth defect.
- Deficiency of the vitamin- D, calcium, etc. during childhood.
- Misaligned healing of a spinal fracture or injury to the supporting ligaments of the spine.
- Habits from everyday activities such as lifting bag, bucket filled with water etc. using one hand.
- Obesity can put uneven pressure on the spine, causing curvature.
- Pregnancy period can result in Lordosis.
- Abdominal muscle of the body is weak and lower back muscle is strong.

Symptoms:

- Stomach is outward.
- The lower back dips inward.
- Back pain or strain.

Treatment:

1. Surgery.
2. Following correct posture of standing, sitting and lying.
3. Treatment by exercise

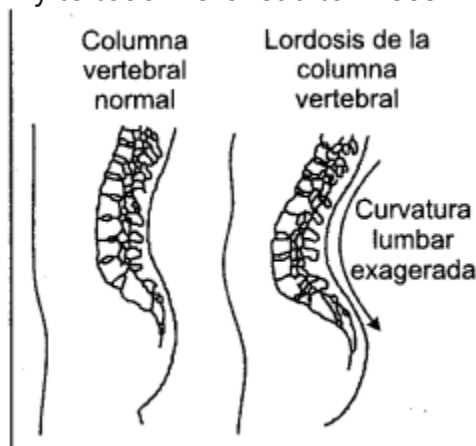
- Flexibility exercise for lower back muscle which is strong.
- Strengthening exercise for muscle stomach which is weak (forward bending exercise).
- Abdominal crunches.
- Place the pillow under the stomach while sleeping in a prone Lying position.

Names of the yoga exercise which help in treatment of Lordosis : Paschimotanasana (Forward Bend Posture), Padahasthasana (Standing Forward Bend Posture), Janu Sirsasana (Head to Knee Posture) Halasana (Plough Posture) Naukasana (Boat Posture) etc.

Following exercise can be performed as a remedy for Lordosis:

- From standing position bend forward from hip level. Repeat this exercise ten times.
- Lie down on back, raise head and legs simultaneously for 10 times.
- Perform sit-ups regularly.
- Halasana should be performed regularly.
- Lie down in supine position, i.e., on back, then raise legs at 45 degree angle. Remain in this position for sometime.
- Toe touching should be performed.
- Sit down and extend your legs forward.

Try to touch forehead to knees. Repeat this exercise 10 times.



(b) Flat Foot: Flat foot is one physical deformity on which the medial longitudinal and transverse arches of foot are depressed and medial border of foot comes in contact with ground. Flat foot deformity can be diagnosed with a very simple test called as 'Wet Foot test'. In this deformity the arch of the foot collapses, with the entire sole of the foot coming into complete or near-complete contact with the ground.

Causes:

- Birth defect.
- Overweight or obesity Deficiency of the vita min D, cal cium, etc. during childhood.

Symptoms:

- Difficulty in running and walking.

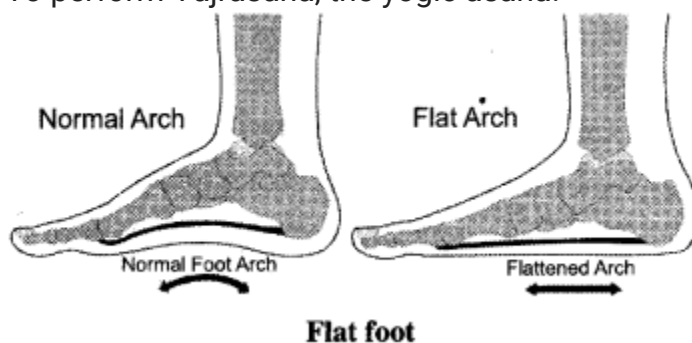
Treatment:

- Surgery.
- Standing on toes.
- Walking on toes.
- Picking small stone with toes and placing it a little far.

Names of the yoga exercise which help in treatment of Flat-foot: Tadasana (Tree posture), Utkatasana (Chair posture), etc.

Following exercises can be performed as a remedy for Flat Foot deformity :

- Walking on heels.
- Walking on inner and outer side of feet.
- Walking on toes.
- To perform up and down the heels.
- Jumping on toes for sometime
- To skip on rope.
- To perform Vajrasana, the yogic asana.



#### Question 5.

Write in detail the effects of insufficient sleep, on human body. [8]

**Answer:**

Sleep plays an important role in the physical health of people. Sleep deprivation occurs



when an individual fails to get enough sleep. The amount of sleep that a person needs varies from one person to another, but on an average most adults need about seven to eight hours of sleep every night in order to feel well-rested and alert.

Effects of insufficient sleep, on human body are as follows :

1. Increases the risk of heart disease, kidney disease, high blood pressure, diabetes, and stroke. Sleep deficiency also increases the menace of obesity. One study of teenagers showed that with each hour of sleep lost, the chances of becoming obese went up. Sleep deficiency increases the risk of obesity in other age groups as well.
2. Sleep helps maintain a balance of the hormones that regulate appetite. Sleep also affects the hormone that controls the blood glucose level and its deficiency may increase the risk for diabetes.
3. Sleep also supports healthy growth and development. Deep sleep triggers the body to release the hormone that promotes normal growth in children and teens. This hormone also boosts muscle mass and helps repair cells and tissues in children, teens, and adults. Prolonged sleep deficiency can change the way in which the immune system responds.
4. Sleep disturbance can also be an indication of other underlying medical conditions or psychological disorders. It may, for instance, be a symptom of Anxiety or Mood Disorder. Furthermore, sleep disturbance that is chronic or severe can bring on or exacerbate serious psychological disorders.

#### **Question 6.**

List the various ill effects of alcohol on an individual. [8]

#### **Answer:**

Alcohol has some immediate or short-term physical effects on the body as a whole, including the brain, the gut and pancreas, the heart and circulation, sleep control and sexual functions. The most obvious and immediate effects of alcohol are on the brain. The effects of alcohol on the brain are felt within about five minutes of alcohol being swallowed. Alcohol slows down or blocks many of the brain's functions. The initial effect might be a reduction in tension or inhibitions, making the drinker feel more relaxed or excited. However, as the intake of alcohol increases, these effects are counterbalanced by less pleasant effects, such as :

- Drowsiness
- Loss of balance
- Poor coordination
- Slower reaction times (critical when driving or operating machinery)
- Slurred speech
- Slowed thought processes

- Nausea and vomiting

As more alcohol is consumed and the blood alcohol concentration (BAC) rises, performance and behaviour deteriorate progressively. The risk of accident, violence or injury increases rapidly with increasing blood alcohol levels.

If the BAC reaches a high enough level, it can lead to life-threatening events such as :

1. Unconsciousness.
2. Inhibition of normal breathing may be fatal, particularly as the person may vomit and can suffocate if the vomit is inhaled.
3. The pituitary gland at the base of the brain, which controls the body's fluid balance, and can leave the person dehydrated and with a headache.
4. The gut, by irritating the lining of the gut as the level of alcohol is increased, with diarrhoea as a possible outcome.
5. The pancreas, which may become inflamed, sometimes chronically. This can cause severe pain and a highly unpleasant reaction to alcohol in the future.
6. The heart and blood circulation, where one or two standard drinks can affect the heart rate, blood pressure, the contraction of heart muscle and its efficiency in pumping blood, and blood flow throughout the body; higher levels of alcohol may result in irregular heart rhythms, raised blood pressure, shortness of breath, and cardiac failure.  
result in irregular heart rhythms, raised blood pressure, shortness of breath, and cardiac failure.
7. Disruption of sleep can be a trigger for a variety of mental health problems.
8. Sexual functioning, particularly in men, who may find it more difficult to get an erection after drinking alcohol beyond low-risk levels.
9. Alcohol can affect the level of risk of particular conditions or diseases, including: cancer; cirrhosis of the liver; heart disease and stroke; cognitive problems (including memory and reasoning); and dementia.

### **Question 7.**

Explain what is contusion. Mention the steps to be followed for its prevention. [8]

#### **Answer:**

Contusion is an injury caused by a forceful hit by a hard object. It is an internal injury. There is no external cut or bleeding over the skin.

Signs and Symptoms : Swelling, pain, bluish colour appears on the outer surface of the skin. Management of Injuries

P – Protection : Protect the injured part from further injury. Do not attempt to pressure or massage the injured part.

R – Rest : Give rest to the injured part and restrict the movement.

I – Ice : Apply ice to the injured part for 15-20 minutes and repeat it 3-4 times in a day if

required for first 24-48 hours of injury, after that apply heat for the dispersion of clotted blood.

C-Compression : Compress the injured part with a crape bandage to restrict the movement.

E – Elevation : Elevate the injured part with slings if required.

S – Support: Support the injured part to avoid painful movement until medical assistance is provided.

Injuries are part of the sport and almost every athlete gets injured at one time or another. Most sports injuries can be predicted and prevented with understanding and immediate treatment.

Following ways helps to prevent contusion :

1. Avoiding workout routine mistakes may help to prevent injuries. Workout routine mistakes are like :
  - Ignoring one's medical condition.
  - Doing the same workout routine day after day.
  - Never taking a rest day.
  - Too much, too soon, too fast, too hard and too often use of muscle.
  - Missing several workouts in a row and then adding additional mileage to catch up.
  - Not using the proper technique.
  - Not wearing the right protective gear.
  - Not doing conditioning exercises before for strengthening the muscles used in play.
  - Not performing stretching exercises before and after games or practice.
  - Not drinking plenty of fluids before, during and after exercise or play.
  - Drinking water prevents dehydration and keeps the muscle flexible.
  - Not having a rest period during practice and games.
  - Rest period can reduce injuries and prevent heat illness.
  - Not stopping the activity if there is pain.
  - Not wearing light clothing.
2. Having adequate amount of calorie and supplements like iron and calcium for the body helps to prevent injury.
3. The player should have a positive approach to game and should look into the game as a means of developing the quality of sportsmanship and hard work.
4. Not having a positive approach to game can create emotional stress and this will affect the physiological process which results in lack of concentration leading to injuries.
5. Immediate first aid care should be provided to the athlete for preventing aggravation of injury.

6. Treatment and rehabilitation can be done through various physiotherapy treatments and modalities.
7. Proper Rehabilitation should be given to an injury for faster and maximum recovery.
8. Return to activity after full recovery helps to prevent the reoccurrence of injury as the muscles are tuned to take the load.

### Section-B (30 Marks)

- Select any two games from this Section.
- Answer any three of the five subparts (a), (b), (c), (d) and (e) from each of the two games selected by you.
- Each subpart is for 5 marks.

### FOOTBALL

#### Question 8. [3 x 5]

- (a) List any five fundamental skills which a football player must possess. [5]
- (b) What decision is to be taken by the referee if the ball bursts or becomes defective during the course of a match? [5]
- (c) Explain the difference between tackling and trapping. [5]
- (d) Mention the basic compulsory equipment used by a referee while conducting a match. [5]
- (e) Mention any five duties of Assistant Referees. [5]

#### Answer:

(a)

Controlling ball	Passing	Shooting	Dribbling	Heading
Chest trap	High Pass	Instep kick	Zig-zag dribble	Attacking header
Thigh trap	Ground Pass	Out-step kick	Dribble and turn left side	Standing header
Feet trap		Bicycle kick	Dribble and turn right side	
Belly trap		Lofted Kick		

Fundamental skills which a football player must possess are :

1. Controlling : To control the ball is to master it. Properly controlling the ball means that a move will be successful. The control move-ments to focus on are directed control and gathering the ball while moving these will introduce speed into the play.
2. Passing : This is the action of giving the ball to a team-mate. It is an essential part of team play. As the core of the game, passing allows a team to :
  - (a) Keep possession of the ball;
  - (b) Set up attacks;
  - (c) Change the direction of play;
  - (d) Counter-attack;

(e) Provide a decisive or final pass.

3. Shooting : This is an action with the objective of dispatching the ball into the opponent's goal. It is the logical conclusion, the culmination of an attack. It is what football is all about. Shooting requires technical qualities (striking the ball well, accuracy), physical qualities (power, coordination, balance) and mental qualities (determination, audacity, self-confidence).

4. Dribbling : This is how an individual moves with the ball when faced by opponents or obstacles. Dribbling allows the player in possession of the ball to eliminate one or more opponents by :

- (a) Making a manoeuvre and taking individual risks;
- (b) Setting up a team move;
- (c) Gaining time to allow support from team-mates;
- (d) Deceiving an opponent (the concept of the feint).

5. Headers : Headers can be associated with mastery of the ball (juggling and control) and passing or shooting the ball. Heading is an essential skill for defending and marking.

(b) Decision to be taken by the referee if the ball burst or becomes defective during the course of a match

- 1. Play is stopped and restarted by dropping the replacement ball where the original ball became defective.
- 2. If the ball becomes defective at a kick-off, goal kick, corner kick, free kick, penalty kick or throw-in, the restart is re-taken.
- 3. If the ball becomes defective during a penalty kick or kicks from the penalty mark as it moves forward and before it touches a player, crossbar or goal posts, the penalty kick is retaken.
- 4. The ball may not be changed during the match without the referee's permission.

(c) Tackling: Most forms of football have a move known as a tackle. The primary and important purposes of tackling are to dispossess an opponent of the ball, to stop the player from gaining ground towards goal or to stop them from carrying out what they intend.

Trapping: Trapping is to gain control over the ball. It is a skill applied to keep possession of the ball. It is a method of gaining control of the ball off of a pass or a loose ball.

Trapping the ball involves using the feet, thighs or chest to bring the ball to the ground while keeping it in the player's possession. It can include stopping the ball completely or redirecting the ball in a controlled manner. When trying to stop or slow the ball, players cushion the ball as it moves towards them.

(d) Referees must have the following equipment :

- Whistle(s)
- Watch(es)
- Red and yellow cards
- Notebook (or other means of keeping a record of the match).

(e) Five duties of Assistant Referee : A match official with a flag positioned on one half of each touchline to assist the referee particularly with offside situations and goal kick /corner kick/throw-in decisions:

They indicate when:

- The whole of the ball leaves the field of play and which team is entitled to a corner kick, goal kick.
- The whole of the ball leaves the field of play and which team is entitled to a throw-in.
- Player in an offside position may be penalised.
- A substitution is requested.
- At penalty kicks, the goalkeeper moves off the goal line before the ball is kicked and if the ball crosses the line; if additional assistant referees have been appointed the assistant referee takes a position in line with the penalty mark.

The assistant referee's assistance also includes monitoring the substitution procedure. The assistant referee may enter the field of play to help control the 9.15 m (10 yards) distance.

## **CRICKET**

### **Question 9. [3 x 5]**

(a) Explain the following : [5]

- (i) Dolly Catch
- (ii) Gully
- (iii) Seam
- (iv) Hook shot
- (v) Half-volley

(b) Differentiate between popping crease and bowling crease. [5]

(c) Explain the following terms : [5]

- (i) Ball tampering
- (ii) Sweep

(d) (i) Write the full forms of ICC and BCCI. [5]

(ii) State the function of ICC and BCCI.

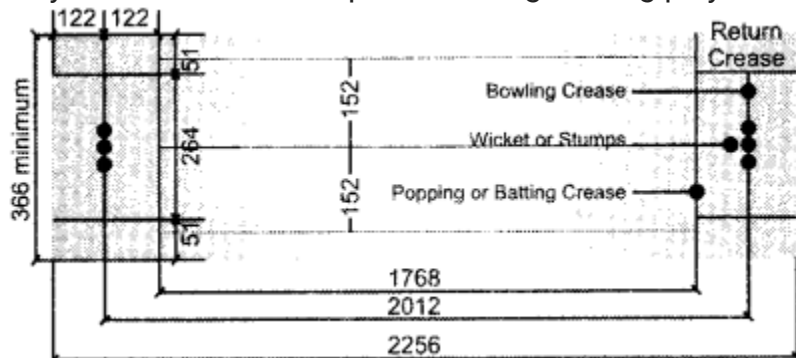
(e) Under which conditions can an umpire change the ball? [5]

**Answer:**

- (a) (i) Dolly Catch : A very easy catch taken by a fielder.
- (ii) Gully : A close fielder near the slip fielders, at an angle to a line between the two sets of stumps of about 100 to 140 degrees.
- (iii) Seam : The stitching on the ball.
- (iv) Hook Shot : A shot, similar to a pull, but played so that the ball is struck when it is above the batsman's shoulder.
- (v) Half Volley : A delivery that bounces just short of the block hole, usually easy to drive or glance away.

(b) Difference between Popping crease and Bowling crease : Crease is one of several lines on the pitch near the stumps (the "popping crease", the "return crease" and the "bowling crease").

Note : Measurements are in centimetres 100 cms = 1 metre Lines in Black are imaginary only and do not exist as pitch markings during play



The popping crease has the same length, is parallel to the bowling crease and is 4 feet (1.22 m) in front of the wicket. Although it is considered to have unlimited length (in other words, runs across the entire field) the popping crease must be marked to at least 6 feet (1.83 metres) perpendicular to the pitch, on either side of the middle of the pitch.

The bowling crease lies 22 yards (66 feet or 20.12 m) away, and marks the other end of the pitch. A bowling crease is 8 feet 8 inches (2.64 m) long with the middle stump placed dead centre. For the fielding side, the crease defines whether there is a no-ball because a fielder has encroached on the pitch or the wicket-keeper has moved in front of the wicket before he is permitted to do so.

(c)

- (i) Ball tampering is the unlawful alteration of the surface or seam of a ball on the field, to affect its motion when bowled.

(ii) Sweep is a shot played to a good length slow delivery. The batsman gets down on one knee and “sweeps” the ball to the leg side.

(d)

(i) ICC-International Cricket Council.

Headquarters : Dubai, United Arab Emirates. BCCI-The Board of Control for Cricket in India.

Headquarters: Mumbai.

(ii) Functions of the International Cricket Council (ICC)

1. It is responsible for organizing major international tournaments of cricket, in which the “Cricket World Cup” is the main.
2. It employs all umpires and referees, who are responsible for the successful events of all Test matches, one-day international and Twenty-20 international tournaments.
3. It deals with the code of conduct for cricket, as well as the professional standards of discipline, action against corruption and match fixing.
4. It monitors the cricket playing conditions, the bowling action review, and the other rules of the ICC.

Functions of the Board of Control for Cricket in India (BCCI)

1. BCCI works as a money churning machine which controls and improves the quality and standard of cricket in India.
2. To select teams to represent India in Test Match, One Day International and Twenty-20 and in any other format in India and abroad as BCCI may decide from time to time.
3. BCCI decides the sponsor, controls IPL, decides with whom and where India will play and also how much of what format will team play.
4. In consultation with various state cricket associations BCCI conducts Ranji, Duleep Trophy, Challenger Series and the other domestic tournaments.
5. To appoint representative on International Cricket Council.
6. To appoint managers and other team officials for Indian team.

(e) Conditions in which Umpire can change the Ball are:

1. If ball is lost or becoming unfit for play. If during play, the ball cannot be found or recovered or the umpires agree that it has become unfit for play through normal use, the “umpires shall replace it with a ball which has had wear comparable with that which the previous ball had received before the need for its replacement. When the ball is replaced, the umpire shall inform the batsmen and the fielding captain.



2. If the umpires together agree that the condition of the ball has been unfairly changed by a member or members of the fielding side, the batsman at the wicket shall choose the replacement ball from a selection of six other balls of various degrees of usage (including a new ball) and of the same brand as the ball in use prior to the breaking.
3. If the umpires together agree that the condition of the ball has been unfairly changed by a member or members of the batting side, the umpires shall select and bring into use immediately, a ball which shall have wear comparable to that of the previous ball immediately prior to the breaking.

## **HOCKEY**

### **Question 10. [3 x 5]**

- (a) Write a short note on Hockey Stick. [5]
- (b) Mention any five duties of the captain of a Hockey team. [5]
- (c) Write the equipment used by a Goal Keeper. [5]
- (d) When is a penalty stroke awarded? [5]
- (e) State the difference between a scoop and a stroke. [5]

### **Answer:**

(a) Each player carries a stick and cannot take part in the game without it. The stick for an adult is usually in the range 89-95 cm (35-38") long. A maximum length of 105 cm (41") was stipulated from 2016. The maximum permitted weight is 737 grams. The majority of players use a stick in the range 19 oz to 22 oz (538 g – 623 g). Traditionally hockey sticks were made of hickory, ash or mulberry wood with the head of the sticks being hand carved. Sticks made of wood continue to be made but the higher grade sticks are now manufactured from composite materials which were first permitted after 1992. These sticks usually contain a combination of fibreglass, aramid fiber and carbon fibre in varying proportions according to the characteristics (flexibility; stiffness; resistance to impact and abrasion) required.

(b) Five Duties of the Captain in Hockey Team are:

- Captain must wear a distinctive arm-band or similar distinguishing article on an upper arm or shoulder or over the upper part of a sock.
- Captain is responsible for the behaviour of all players on their team.
- To ensure that substitutions of players on their team are carried out correctly.
- Understanding different game strategies and latest rules and regulation helps to make plays on the field.
- Work hard to develop the relationships between the players and coach(es).

(c) Equipment used by Goalkeeper are :  
Hand protectors:

- Each have a maximum width of 228 mm and length of 355 mm when laid flat, palm upwards.
- Must not have any additions to retain the stick when the stick is not held in the hand.
- Leg guards : Each have a maximum width of 300 mm when on the leg of the goalkeeper.

(d) A penalty stroke is awarded :

1. For an offence by a defender in the circle which does not prevent the probable scoring of a goal.
2. For an intentional offence in the circle by a defender against an opponent who does not have possession of the ball or an opportunity to play the ball.
3. For an intentional offence by a defender outside the circle but within the 23 metres area they are defending.
4. For intentionally playing the ball over the back-line by a defender^ note: goalkeepers are permitted to deflect the ball with their stick, protective equipment or any part of their body in any direction including over the back line.
5. For an offence by a defender in the circle which prevents the probable scoring of a goal.
6. If the ball hits a piece of equipment lying in the circle and a probable goal is prevented, a penalty stroke may be awarded.
7. For an intentional offence in the circle by a defender against an opponent who has possession of the ball or an opportunity to play the ball.
8. If there is another offence or misconduct before the awarded penalty has been taken.

(e) Scoop is a method of passing or shooting the ball by leveraging the stick underneath the ball to pick it up and fling it through the air while Penalty stroke is a free one-on-one shot from the penalty stroke line awarded when a foul prevents a likely goal. The goalkeeper must remain behind the goal line until the ball is hit.

## **BASKETBALL**

### **Question 11. [3 x 5]**

- (a) Explain Three Second Rule and Twenty- four Second Rule. [5]
- (b) What is free throw? State the steps to be followed for taking a free throw. [5]
- (c) Mention the violations in the game of Basketball. [5]
- (d) What is a double foul in the game of basketball? What is the penalty for this foul? [5]
- (e) Explain technical foul and multiple foul. [5]

### **Answer:**

- (a) Three Second Rule: The three seconds rule is often termed a lane violation requires

that in basketball, a player shall not remain in the opponents' restricted area for more than three consecutive seconds while that player's team is in control of a live ball in the frontcourt and the game clock is running. The countdown starts when one foot enters the restricted area and resets when both feet leave the area.

Twenty-four Second Rule : A shot for a field goal is attempted near the end of the shot clock period and the shot clock signal sounds while the ball is in the air. If the ball does not touch the ring, a violation has occurred unless the opponents have gained an immediate and clear control of the ball. The ball shall be awarded to the opponents for the throw-in from the place nearest to where the game was stopped, except directly behind the backboard.

(b) A free throw is a shot that a player gets after they are fouled. It is a direct and unguarded shot from 15-feet away from the hoop. Player gets two free throws if shot does not go in the hoop after the foul no basket is awarded. If the shot does go in after the fouled then the basket counts and one more free throw is awarded. If a player gets a technical foul (a foul for bad behaviour), then a player on the other team is given one free throw.

Steps to be followed for taking free throw are:

1. Get the body in position. If one right handed then right foot should be lined up with the rim. Shoulders should be square and one should feel balanced – being off balanced will affect control.
2. Make sure to keep eyes on the front of the rim before shot and while shoot.
3. Keep shooting arm parallel to the rim when shoot the ball.
4. Bend knees. The strength of shot should come from legs rather than arms.
5. Shoot the ball off finger tips. If using palm, shot will be flat and not get good arc.
6. Make sure to follow through with shot! This will help get arc, rotation, and consistency.

(c) The violation in the game of Basketball are:

1. Walking or Traveling : Taking more than 'a step and a half without dribbling the ball is traveling. Moving pivot foot once one has stopped dribbling is traveling.
2. Carrying or palming : When a player dribbles the ball with hand too far to the side of or, sometimes, even under the ball.
3. Double Dribble : Dribbling the ball with both hands on the ball at the same time or picking up the dribble and then dribbling again is a double dribble.
4. Held ball : Occasionally, two or more opposing players will gain possession of the ball at the same time. In order to avoid a prolonged and/or violent tussle, the referee stops the action and awards the ball to one team or the other on a rotating basis.

5. Goaltending : If a defensive player interferes with a shot while it's on the way down toward the basket, while it's on the way up toward the basket after having touched the backboard, or while it's in the cylinder above the rim, it's goaltending and the shot counts. If committed by an offensive player, it's a violation and the ball is awarded to the opposing team for a throw-in.
6. Backcourt violation : Once the offense has brought the ball across the mid-court line, they cannot go back across the line during possession. If they do, the ball is awarded to the other team to pass inbounds.
7. Time restrictions : A player passing the ball inbounds has five seconds to pass the ball. If the player does not, then the ball is awarded to the other team. Other time restrictions include the rule that a player cannot have the ball for more than five seconds when being closely guarded and, in some states and levels, shot-clock restrictions requiring a team to attempt a shot within a given time frame.

(d) Double foul : A foul to be considered as a double foul, both fouls must have equal penalties.

Penalty for Double Foul : The penalties offset one another, so the offense retains the possession of the ball and inbounds the ball from the side-line. Both players, however, are charged with personal fouls.

(e) Technical Foul: An official warning is given to a player for an action or behaviour which, if repeated, may lead to a technical foul. That warning shall also be communicated to the head coach of that team and shall apply to any member of that team for any similar actions for the remainder of the game. An official warning shall be given only when the ball becomes dead and the game clock is stopped.

Multiple Foul : A multiple foul occurs when 2 or more teammates commit personal fouls against the same opponent at approximately the same time. For all double, multiple and simultaneous fouls the clock must be stopped between fouls.

## **VOLLEYBALL**

### **Question 12. [3 x 5]**

- (a) Write the duties of a Volleyball coach. [5]
- (b) Write the service faults in Volleyball. [5]
- (c) (i) What is the procedure adopted to start a game? [5]
- (ii) List any two National level tournaments in Volleyball.
- (d) Differentiate between : [5]
- (i) Service zone and substitution zone.
- (ii) Positional fault and rotational fault.
- (e) Mention the duties of a line judge. [5]

**Answer:**

(a) The Duties of Volleyball Coach are :

1. Duties of a volleyball coach involve focusing on the process.
2. Help every player on the team : Give every player equal attention, regardless of skill level. More skillful players often are given more opportunities to play, so pay closer attention to less-skilled players during practice.
3. Separate the performance from the performer : One of the most important things coaches can do is build every player's self-esteem no matter what their skill level is. Make sure every comment is constructive, sandwiched between compliments and correction.
4. Be demanding and disciplined, never demeaning : The coaches style must be based on the laws of learning. If screaming, yelling, or putting down a player was the best way to teach, then all teachers in school classrooms would be using that method.
5. Coaches must make sure they are teaching, not taking out their frustrations or setting unrealistic expectations. Coaches should never be demeaning to their athletes.
6. Coach smarter, not harder : Experience is a great teacher, but attending coaching clinics and learning from other coaches is essential. Sharing and bouncing ideas off other coaches will lead to greater coaching wisdom.
7. Be innovative, not imitative : This is hard to do, but it's best to not just copy other successful coaches. For instance, don't just copy volleyball practice plans.

(b) Service Faults in Volleyball are : The service is the act of putting the ball into play, by the back-right player, placed in the service zone.

- The ball shall be hit with one hand or any part of the arm after being tossed or released from the hand(s).
- Only one toss or release of the ball is allowed. Dribbling or moving the ball in the hands is permitted.
- At the moment of the service hit or take-off for a jump service, the server must not touch the court (the end line included) or the floor outside the service zone.
- After the hit, he/she may step or land outside the service zone, or inside the court.
- The server must hit the ball within 8 seconds after the 1st referee whistles for service.
- A service executed before the referee's whistle is cancelled and repeated.

(c) (i) Procedure Adopted to Start the game are:

- Before the match, the 1st referee carries out a toss to decide upon the first service and the sides of the court in the first set.
- If a deciding set is to be played, a new toss will be carried out.

- The toss is taken in the presence of the two team captains.
- The winner of the toss chooses either the right to serve or to receive the service, or the side of the court.
- The loser takes the remaining choice.

(ii) National Level Tournament in Volley-ball are:

1. Senior Nationals : The Tournament is held for state teams all over the country. Few Government Institutions also participate in this annual tournament. The tournament follows a league-cum-knockout system, both for men and women teams. It is considered as the topmost volleyball league currently in India. Playing in this league leads to the Final step in selection towards the Senior National Team.

2. Youth Nationals : It is held for the U-21 Category state teams all over the country. Few Government Institutions also participate in this annual tournament. The tournament follows a league-cum-knockout system, both for boys and girls teams. Playing in this league leads to the Final step in selection towards the U-21 National Team.

(d)

(i) Difference between Service Zone and Substitution Zone:

**Service Zone :** The service zone is a 9 m wide area behind each end line. It is laterally limited by two short lines, each 15 cm long, drawn 20 cm behind the end line as an extension of the side lines. Both short lines are included in the width of the service zone. In depth, the service zone extends to the end of the free zone.

**Substitution Zone:** This is the part of the free zone through which substitutions are carried out. The substitution zone is limited by the extension of both attack lines up to the scorer's table.

(ii) Difference between Positional Fault and Rotational Fault:

**Positional Fault :** The team commits a positional fault, if any player is not in his/her correct position at the moment the ball is hit by the server. When a player is on court through illegal substitution, and play restarts, this is counted as a positional fault with the consequences of an illegal substitution.

**Rotational Fault :** A rotational fault is committed when the service is not made according to the rotational order. It leads to the scorer stops play by the buzzer; the opponent gains a point and next service;

(e) Duties of line judge are :

1. To perform their functions by using flags (40 x 40 cm), to signal.
2. To check whether the ball is 'in' or 'out' whenever the ball lands near their line(s).
3. To check the touches of "out" balls by the team receiving the ball.
4. To check whether the ball is touching the antenna, the served ball and the third hit of the team crossing the net outside the crossing space, etc.
5. To check any player (except the server) stepping outside of his/her court at the moment of the service hit.
6. To check the foot faults of the server.
7. To check whether there is any contact with the top 80 cm of the antenna on their side of the court by any player during his/her action of playing the ball or interfering with the play.
8. To check whether the ball is crossing the net outside the crossing space into the opponent's court or touching the antenna on his/her side of the court.
9. To repeat the signal at the 1st referee's request.

## **TENNIS**

### **Question 13. [3 x 5]**

- (a) Explain the following : [5]
  - (i) Double fault
  - (ii) Chip shot
- (b) List any five types of strokes in the game of Tennis. [5]
- (c) What are the duties of a coach in Tennis? [5]
- (d) Explain the following : [5]
  - (i) Set
  - (ii) Ace
  - (iii) Slice
  - (iv) Down the line
  - (v) Drive
- (e) Explain how a forehand shot is taken. [5]

### **Answer:**

- (a) Double Fault and Chip Shot

1. Double Fault : Two missed serves in a row. The server will lose the point. The server has two attempts to get the ball in. If the ball lands outside the service box or does not clear the net or the net post, it is known as a 'fault'. After one fault the server may try again. If both tries result in faults, a 'double fault' is called and the opponent wins the point.
2. Chip Shot : A chip is an under-spin blocking motion used to hit a tennis ball. In other words blocking a shot with backspin, creating a low trajectory. The aim of a chip is to put the opponent under pressure.

(b) Five Types of Strokes in Tennis are:

1. Serve : The essentials of this stroke include fluid motion and rotation of the entire body into the shot. Turn to predominant side at the baseline with the front foot angled towards the net post. Bring the racquet back while tossing the ball in the air slightly toward the other shoulder with free hand. Keeping eyes on the ball, quickly coil up at the waist and knees and release into an overhand motion that drives the ball at the opposite server box.

2. Forehand : This is usually the strongest shot, but requires footwork and focus. Remain in ready position with the knees and torso bent. Keep eyes on the ball as you reach back with the racquet. However, too much backswing may result in a late stroke that lacks power or direction. How much control one has over the return swing will depend on playing strategy and timing. Concentration, balance and practice will help to develop more control.

3. Backhand : It takes good footwork and timing to get into position for the backhand. Fluid body rotation is important. Beginning players tend to use a short backswing and lack follow-through, making their backhand shot weaker. Backhands can be delivered with one or both hands. The one-handed style will give more reach while the two-handed technique provides better power and control.

4. Volley : A volley occurs when one approaches the net and hits the ball in the air. A half-volley is volleying after a bounce, not in the air. Making a strong volley involves a short backswing and hitting the ball when it's directly in front.

5. Overhead : An overhead stroke is any shot besides the hit that the ball hits the racket's long axis close to vertical. The point of contact between the ball and racket with this stroke is typically above the player's head. An overhead stroke can be used to hit off an opposing player's lob stroke.

(c) Duties of Coach in Tennis are :

1. Learn how each student learns best : Some students are visual learners, since they emulate what they see. Other students are auditory learners who understand by listening. Some are kinesthetic learners, in that they need to perform a movement to understand it best. Make an assessment of the students' learning style and adjust the message accordingly.

2. Separate the performance from the performer : One of the most important things coaches can do is build every player's self-esteem, no matter what their skill level is. Make sure every comment is constructive, sandwiched between compliments and correction.



3. Be demanding and disciplined, never demeaning : The coaches style must be based on the laws of learning. If screaming, yelling, or putting down a player was the best way to teach, then all teachers in school classrooms would be using that method. Coaches must make sure they are teaching, not taking out their frustrations or setting unrealistic expectations. Coaches should never be demeaning to their athletes.

4. Coach smarter, not harder : Experience is a great teacher, but attending coaching clinics and learning from other coaches is essential. Sharing and bouncing ideas off other coaches will lead to greater coaching wisdom.

5. Be innovative, not imitative : This is hard to do, but it's best to not just copy other successful coaches. For instance, don't just copy practice plans.

6. Put the needs of the player first : The experience of coaching is first and foremost about providing a secure, productive, healthy and motivating environment for players to learn, develop and grow. It is not about satisfying the coaches or parents' needs. Do not exploit your players.

7. Be a role model : A coach should emphasise the importance of hard work, perseverance attentiveness, determination health and fitness. The greatest impact however, is when coach personally embody and repeatedly display these attributes. "Do as I say" is not as powerful a message as "Do as I do!"

(d)

- Set: A set consists of 6 games; a player that win 6 games with at least a two-game advantage wins the set.
- Ace : When a serve is not returned by the receiving tennis player, resulting in a point for the player who served.
- Slice : A type of shot with underspin.
- Down the Line : A ball that is hit straight along the side-line of the tennis court.
- Drive: It is a Fairly a hard hit. Two major types of drives are forehand and backhand drive.
- Flat drive is hit hard and fairly low.

Slice drive is a hit lower than flat and much lower than topspin. Top spin drive is hit hard and relatively low, but has more margin of clearance than flat.

(e) Steps for Taking Forehand Shot are: As with most strokes in tennis the forehand is hit on the move using a variety of different spins.

1. As the ball approaches stay in open stance position.

2. Rotates hips, shoulders and arms as part of the take back.
3. Now start unwinding body with dominant arm dropping down (to help generate topspin) as it trails the rest of the body forward towards the ball.
4. Continue rotating and swing the racket up, over and through the ball and make contact.
5. The front of the body and head should be facing the net.
6. Follow through by continuing the arms extension forward then across the body towards the non-dominant side.
7. Finally, complete the stroke with the weight shifted to the left leg (if right handed) and the racket head hovering around the left shoulder.

## BADMINTON

### Question 14. [3 x 5]

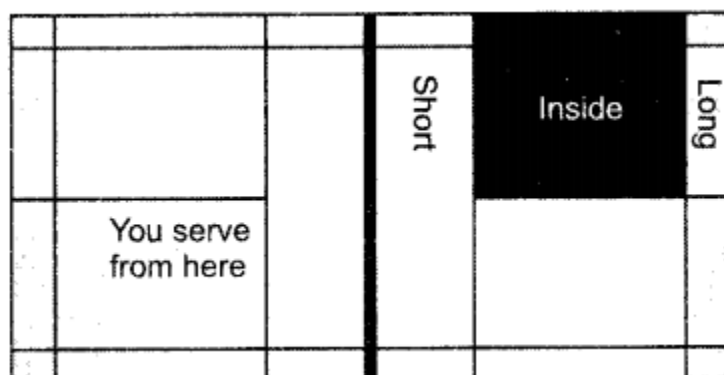
- (a) Discuss the rule of a service in doubles. [5]
- (b) What happens if the shuttlecock gets stuck on the net? [5]
- (c) (i) What is meant by bird in the game of Badminton? [5]
- (ii) Name the different types of strokes played by a badminton player.
- (d) Explain the following terms : [5]
  - (i) Side out
  - (ii) Waist fault
- (e) (i) Explain the following shuttle grips : [5]
  - (1) Out of hand grip
  - (2) Mid grip
  - (3) Base grip
- (ii) What is the weight of a shuttle cock? How many feathers are there in a shuttle cock?

### Answer:

(a) Service Rule in Doubles

1. Service Boundaries for Badminton

Doubles : Serve to the darkened area so that the shuttlecock falls inside.



## 2. Serving and receiving courts

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

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

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

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

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

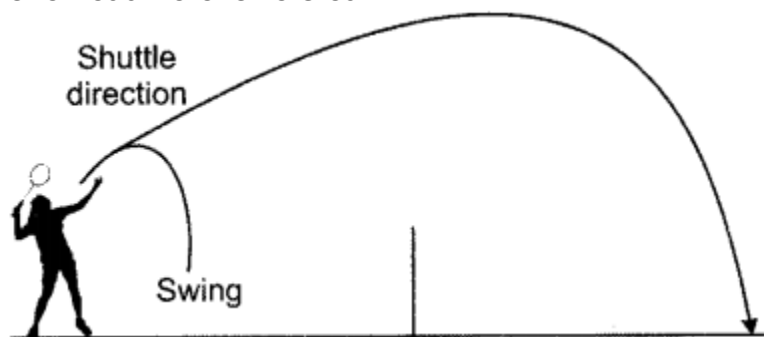
(b) If Shuttlecock gets struck in Net : After the service is returned, the shuttle is caught on the net and remains suspended on its top, or after passing over the net is caught in the net then the umpire shall call out let. When a "let" occurs, play since the last service shall not count and the player who served last shall serve again,

(c) (i) A shuttlecock (also called a bird or birdie) is a high-drag projectile used in the sport of badminton. It has an open conical shape formed by feathers (or a synthetic alternative) embedded into a rounded cork (or rubber) base. The shuttlecock's shape makes it extremely aerodynamically stable. Regardless of initial orientation, it will turn to fly cork first, and remain in the cork-first orientation.

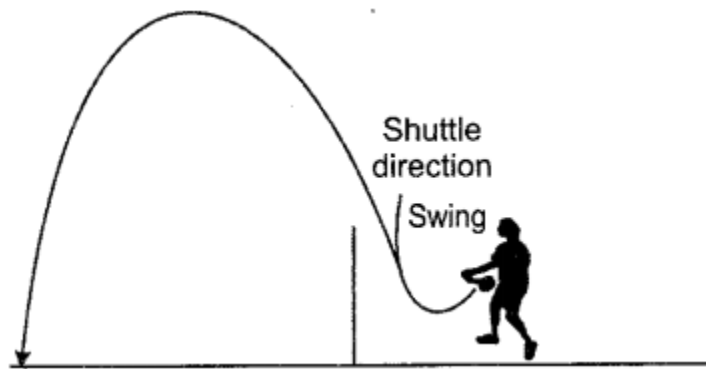
(ii) Different Strokes Played by Badminton Player are:

1. Defensive Badminton Clear/Lob : A clear or lob is a good way to get yourself more organized while you're under pressure and buys some time to work back into the rally.

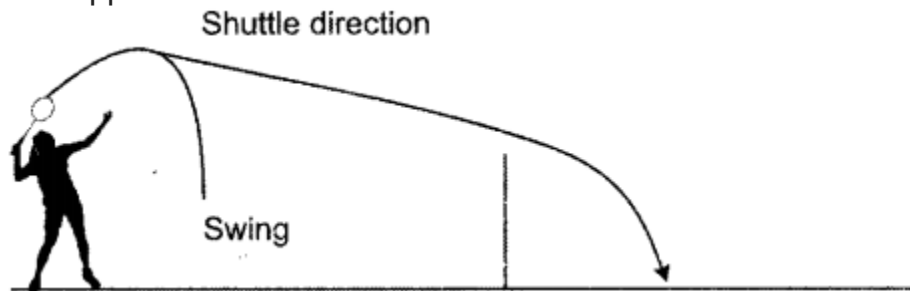
### Overhead Defensive Clear



### Underarm Defensive Clear

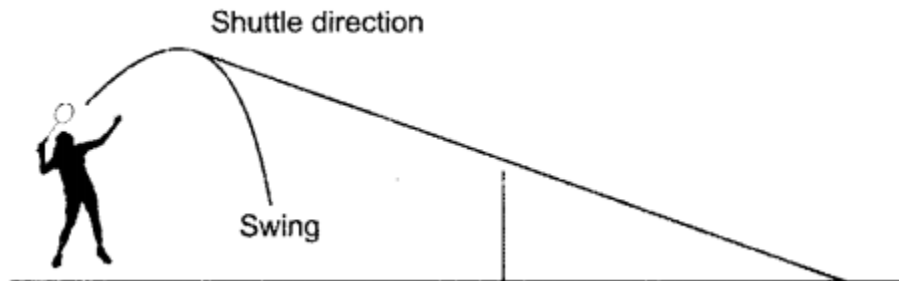


2. Badminton Drop Shot : The badminton drop shot is semi-offensive. It is performed from the back of the court and is usually used to maintain the pace of the game. A drop shot performed at a steep angle lands on the ground quicker, compared to the clear or lob. Opponent has to rush forward to retrieve it.



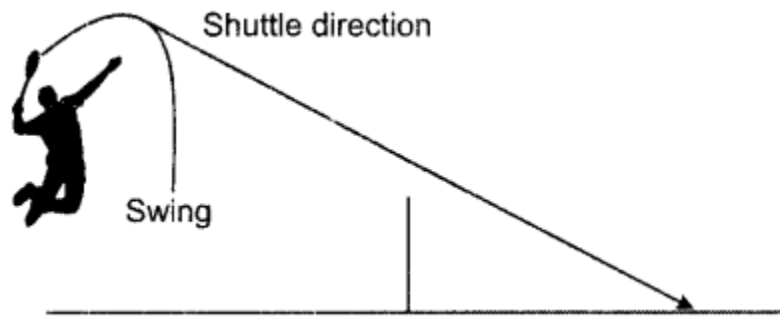
3. Badminton Smash : The smash is often known as the 'winning shot' in badminton. It's used with the intention to end a rally.

Shuttle direction

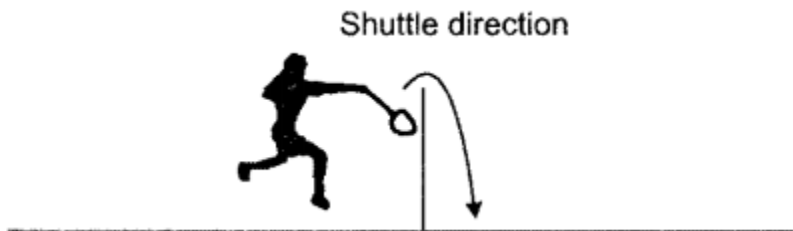


4. Badminton Jump Smash : This is a more powerful version of the badminton smash. It is also one of the hardest badminton shots to perform. To hit this shot, one has to jump

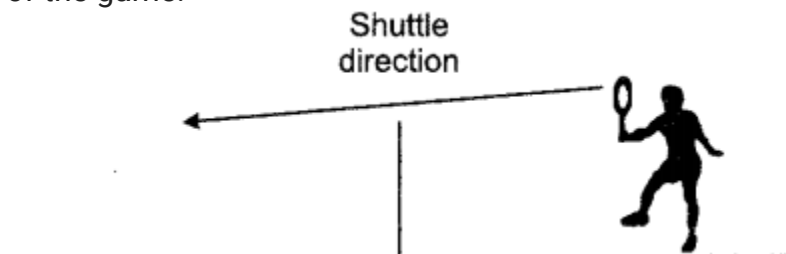
and hit the smash in mid-air.



5. Badminton Net Shot (Tumbling / Spinning Net Shot) : Badminton shots along the net (known as 'net shots') are used to create opportunities and dominate the front of the court. A tumbling net shot enables the shuttle to tumble across just slightly above the net.



6. Badminton Drive : Drives are fast and furious badminton shots exchanged horizontally across the net. One of the main reasons to hit the drive is to increase the pace of the game.



(d) (i) Side Out : This occurs when the side that is serving loses the serve and becomes the receiving team.

(ii) Waist Fault : The whole shuttle shall be below the server's waist at the instant of being hit by the server's racket. The waist shall be considered an imaginary line round the body, level with the lowest part of the server's bottom rib. This is an important rule: it's to prevent the player from smashing as he / she serve !

(e) (i) Shuttle Grips :

1. Out of Hand Grip : In this the shuttle cock is held with tip of the thumb and index finger.

2. Mid Grip : In this the shuttle cock is held with tip of the thumb and two finger at base

of the shuttle.

3. Base Grip : In this the shuttle cock is held with tip of the thumb and fingers around the shuttle at the shafts of its feathers and the cork.

(ii) The feathered shuttle shall weigh from 4.74 to 5.50 grams and shall have 16 feathers fixed in the base.

## SWIMMING

### Question 15. [3 x 5]

- (a) List the freestyle events for men. [5]
- (b) (i) What is the position of backstroke turn indicators? [5]
- (ii) Which lane is given to the best swimmer?
- (c) Explain the starting stance of a swimmer in the backstroke event. [5]
- (d) (i) What is a Dolphin kick? [5]
- (ii) Describe any two duties of the judges of stroke.
- (e) Explain the following terms : [5]
  - (i) Tapper
  - (ii) Peddler

### Answer:

(a) Freestyle events for men are 50, 100, 200, 400, 800 and 1500 metres Freestyle Relays 4 x 100 and 4 x 200 metres

(b)

(i) Position of Turn Backstroke Indicator :

Backstroke turn indicator posts should be installed 5 metres from each end of the pool and backstroke flags should be 1.8 metres to 2.5 metres above the water.

(ii) Lane for Best Swimmer : Except for 50 metre events in 50 metre pools, assignment of lanes shall be (number 1 lane being on the right side of the pool (0 when using pools with 10 lanes) when facing the course from the starting end) by placing the fastest swimmer or team in the centre lane in pool with an odd number of lanes, or in lane 3 or 4 respectively in pool having 6 or 8 lanes. In pools using 10 lanes, the fastest swimmer shall be placed in lane 4. The swimmer having the next fastest time is to be placed on his left, then alternating the others to right and left in accordance with the submitted times. Swimmers with identical times shall be assigned their lane positions by draw within the aforesaid pattern.

(c) Swimmers Starting Stance in Backstroke Event : Prior to the starting signal, the swimmers shall line up in the water facing the starting end, with both hands holding the

starting grips. Standing in or on the gutter or bending the toes over the lip of the gutter is prohibited. When using a backstroke ledge at the start, the toes of both feet must be in contact with the end wall or face of the touchpad. Bending the toes over the top of the touchpad is prohibited.

(d) (i) Dolphin Kick : In the dolphin kick, both legs do a simultaneous whipping movement, with the feet pointed. The dolphin kick is a bidirectional (functioning in two directions) kick that requires abdominal, hip, lower back, and leg strength. Also, it requires an amazing amount of ankle flexibility and anaerobic conditioning.

(ii) Two Duties of the Judges of the Stroke are:

1. Judge of stroke shall ensure that the rules related to the style of swimming designated for the event are being observed, and shall observe the turns and the finishes to assist the inspectors of turns.
2. Judges of Stroke shall report to the Referee any violation on signed cards detailing the event, lane number, and the infraction.

(e) (i) Tapper : A tapper in blind swimming is a person that taps a swimmer on the head when they are coming to a wall. Tappers may assist swimmers by running from one end of the pool to the other.

(ii) Peddler : It is an equipment which assist in learning swimming skill. It assists in swimming.

## **ATHLETICS**

### **Question 16. [3 x 5]**

- (a) Explain the event triple jump. [5]
- (b) What is the difference between marking radius and running radius? [5]
- (c) Draw a neat diagram of a Shot-Put sector with all its specifications. [5]
- (d) List the fundamental skills required by an athlete, for the event of Discus throw. [5]
- (e) Explain the following terms : [5]
  - (i) Stagger
  - (ii) Athlete
  - (iii) Shoulder Shrug
  - (iv) Heat
  - (v) Lane

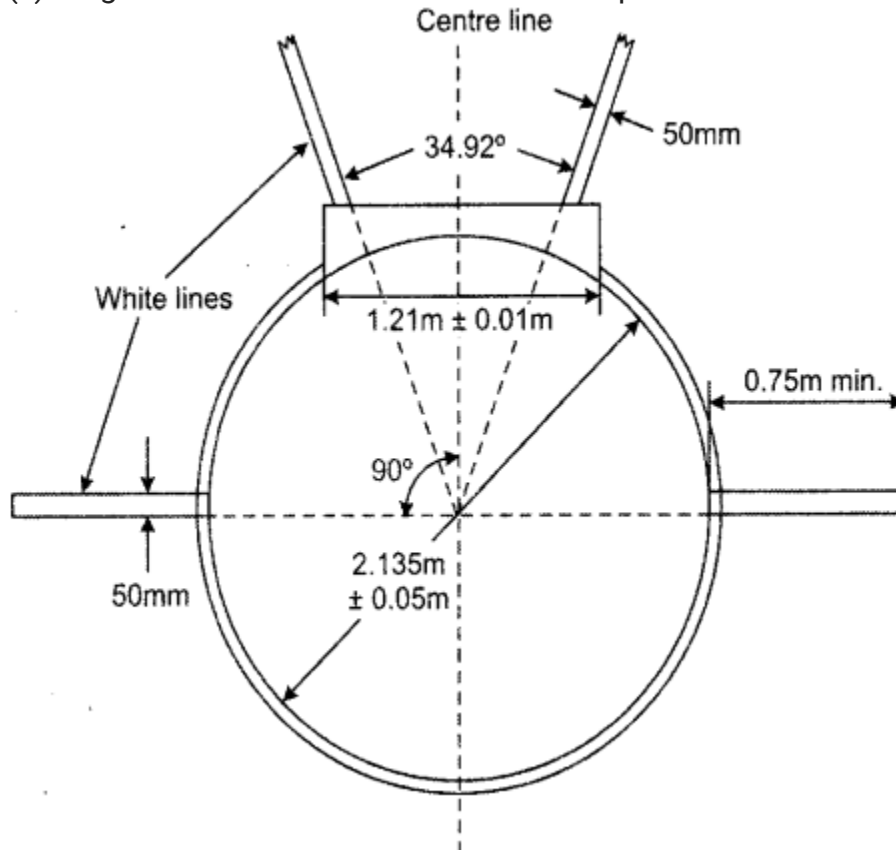
### **Answer:**

(a) Triple Jump Event : The triple jump, some-times referred to as the hop, step and jump or the hop, skip and jump, is a track and field event, similar to the long jump. It is a horizontal jumps. The competitor runs down the track and performs a hop, a bound and then a jump into the sand pit. In hop, the athlete takes off and lands on the same foot. In step, athlete lands on the other foot. In jump, athlete lands in any manner, usually with

both feet together. The triple jump was inspired by the ancient Olympic Games and has been a modern Olympics event since the Games inception in 1896.

(b) Running distance radius is an imaginary line through which the athlete is supposed to run. What is actually used for marking the track is called curve distance radius or marking distance radius.

(c) Diagram of Shot-Put Sector with all its specifications:



(d) Fundamental Skills Required by an Athlete for Discus Throw : The shot put consists of three movements: the glide or rotation, the standing power position, and the release. Movements involved in the discus include body rotation within the boundaries of a ring and rely on centripetal forces and torque, culminating with a release. A successful throw . requires the transfer of explosive strength and maximal muscular force onto the object in the shortest possible time.

The importance of muscular strength drives the requirement for throwers to develop leg strength in the early stages of their careers. Strength is so important for a thrower. Athlete with weaker, speed strength, coordination and ' flexibility find it difficult to develop and refine technique as quickly than an athlete having good speed strength, coordination and flexibility.



(e) (i) Stagger : The arrangement of the runners in lanes on a running Athletic track at the start of a race, so that the runner in the inside lane is positioned behind those in the next lane and so on until the outside lane. This is done to place the runners to run the equal distance for a specified distance race.

Stagger for 400 m track

$$= 2 - (1.22 \times (\text{Lane} - 1))$$

For example, applying the formula to lane six:

$$\text{Stagger} = 6.283184 (1.22 \times 5)$$

$$= 6.283184 \times 6.1$$

$$= 38.327$$

(ii) Athlete : A person who takes part in competitive track and field events (athletics).

(iii) Shoulder Shrug : Shoulder shrugging technique is a type of finishing the athlete shrugs his opposite shoulder to the tape by turning the chest sideways into the tape at the very last movement.

(iv) Heat : One of a series of races or competitions, the winners of which then compete against each other in the next part of the competition.

(v) Lane : A narrow marked section of a track or that is used by one person taking part in a race. The track should have a minimum of 6 and a maximum of 8 lanes separated and bounded on both sides by white lines 50mm wide. The lanes shall all be  $1.22\text{m} \pm 0.01\text{m}$  wide including the lane line on the right.

Note : For all tracks constructed before 1 January 2004, the lanes may have a width of maximum 1,25 m. However, when such a track is fully resurfaced or replaced, the lane width shall comply with this Rule.