CBSE CLASS 12 Physical Education Sample Paper Solution 2024-25

SECTION -A

Ques 1. How many total matches will be played in a knock out fixture of 19 teams

A. 18
B. 17
C. 20
D. 16

Ans. A

Solu. In a knockout competition, every match eliminates one team, and the last team standing is the winner. There will therefore be 18 matches in order to determine the victor from the 19 teams, as 18 teams must be eliminated.

Ques 2. Given below are the two statements labeled Assertion (A) and Reason (R). Read 1 the statements and choose the appropriate option from the options given below:
Assertion: The knock out tournament is an elimination tournament
Reason: In knock out tournament, winner of each match advances in the tournament and the loser gets eliminated.
In the context of the above two statements, which one of the following is correct?

A. Both (A) and (R) are true and (R) is the correct explanation of (A).
B. Both (A) and (R) are true, but (R) is not the correct explanation of (A).
C. (A) is true, but (R) is false.
D. (A) is false, but (R) is true.

Ans. A

Solu. In a knockout event, teams are removed from the competition right away if they lose a match. This provides a clear explanation of the claim, proving the claim and reason to be true.

Ques 3. Match the following:

List I	List II
I Knock Knee	1 Increase exaggeration of backward curve
II Kyphosis	2 Wide gap between the knees when standing with feet together
III Lordosis	3 Knees touch each other in normal standing position
IV Bow legs	4 Inward curvature of the spine

A. I-3, II-1, III-4, IV-2
B. I-1, II-3, III-4, IV-2
C. I-4, II-2, III-1, IV-3
D. I-2, II-3, III-4, IV-1

Ans. A

Solu. A knock knee occurs when two people's knees come into contact while standing normally.
Exaggerated rearward bend (typically in the thoracic spine) is the hallmark of kyphosis.
Lordosis refers to the inward curvature of the lower back.
Bow Legs is standing with feet together, legs have a large space between the knees.

Ques 4. For developing muscles, which nutrient should be increase in diet

A. Vitamins
B. Protein
C. Minerals
D. Carbohydrates

Ans. B

Solu. The building blocks of muscles are proteins. Increasing protein consumption promotes muscle growth and repair, both of which are essential for the development of muscles.

Ques 5. Identify the asana:

A. Paschimottanasana
B. Halasana
C. Vajrasana
D. Dhanurasana

Ans.

Solu.

Ques 6. Which asana is pose like cobra?

A. Bhujangasana
B. Dhanurasana
C. Vajrasana
D. Ardhmatsyendrasana

Ans. A

Solu. Bhujangasana, or the Cobra Pose, is a yoga pose that mimics a cobra's rising head. In this pose, the practitioner assumes the position of a cobra by lying on their stomach and raising their chest while maintaining a grounded lower body.

Ques 7. Deaflympics Games was first organized in the year……

A. 1896
B. 1960
C. 1924
D. 1951

Ans. C

Solu. After the Olympics, the Deaflympics are among the oldest multi-sport competitions, having been founded in 1924 in Paris under the name International Silent Games.

Ques 8. Menarche is defined as the:

A. Ending of menstrual period of women
B. Beginning of menstrual period in women
C. Time of pregnancy
D. Missing of menstrual cycle

Ans. B

Solu. Menarche is the term used to describe the start of menstruation, which signifies the start of a woman's reproductive years. Usually, it happens during adolescence.

Ques 9. Which of the following are fat soluble vitamins

A. Vitamin d & k
B. Vitamin b & c
C. Vitamin a & e
D. Both option a & c

Ans. D

Solu. The vitamins A, D, E, and K are fat-soluble. Unlike water-soluble vitamins, which must be supplied more regularly, these vitamins are kept in the body's fatty tissues and the liver.

Ques 10. Match the following:

I Plate Tapping Test	1. Upper body strength boys
II Push up	2. Reaction time
III Partial Curl up	3. Upper body strength girls
IV Modified pushup	4. Abdominal strength

A. I-2, II-1, III-4, IV-3
B. I-2, II-3, III-1, IV-4
C. I-1, II-3, III-2, IV-4
D. I-2, II-3, III-4, IV-1

Ans. A

Solu. The Plate Tapping Test, which involves quickly switching between two plates, is used to gauge reaction time.
Push-up: A popular exercise for males, it evaluates upper body strength.
Partial Curl-up: Assesses the strength and endurance of the abdomen.
Modified Pushup: Frequently used to evaluate girls' upper body strength.

Ques 11. Which of the following is a physiological factor determining flexibility?

A. Bone density
B. Joint structure
C. Cardiac output
D. Tidal Volume

Ans. B

Solu. The range of motion at a joint, which is mostly governed by the joint structure—that is, the type of joint and the connective tissues surrounding it—determines flexibility. There is no direct correlation between flexibility and bone density, cardiac output, or tidal volume.

Ques 12. The ability to tolerate higher concentration of ……. Can help in improving endurance performance.

A. Lactic acid
B. Hydrochloric acid
C. Acetic acid
D. Sulphuric acid

Ans. A

Solu. Intense or continuous activity causes muscles to accumulate lactic acid. Since lactic acid postpones the onset of tiredness, the capacity to tolerate and eliminate it is essential for increasing endurance performance.

Ques 13. If a ball is hit and it is stop by gravitational force, this is an example of which law of Motion.

A. Law of Inertia
B. Law of acceleration
C. Law of action and reaction
D. Both a & b

Ans. A

Solu. An object will remain in motion or at rest until acted upon by an external force, according to Newton's First Law of Inertia. The ball is stopped by gravity, which illustrates the law of inertia.

Ques 14. In which of the following sport friction plays the least important role.

A. Car race
B. Football
C. Ice skating
D. Hockey

Ans. C

Solu. Friction is reduced as much as possible when ice skating to enable smooth skating. More friction is needed for movement and control in other sports, such as football, hockey, and auto racing.

Ques 15. Instrumental aggression is related to

A. Accepting defeat
B. Achieving goal
C. Only performance
D. Hurting someone to gain something

Ans. B

Solu. When aggressiveness is employed as a means to an end, like winning a competition, as opposed to just hurting someone, it is referred to as instrumental aggression.

Ques 16. Given below are the two statements labeled Assertion (A) and Reason (R).
Assertion: Aggression is part of human behavior and is necessary for an individual to live and struggle for higher achievements.
Reason: Aggression is inevitable and inseparable in sport activities.

In the context of the above two statements, which one of the following is correct?

A. Both (A) and (R) are true and (R) is the correct explanation of (A).
B. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

C. (A) is true, but (R) is false.
D. (A) is false, but (R) is true.

Ans. B

Solu. Although both claims are accurate, the justification offered does not clearly address the claim. While aggression is not always necessary in athletics, it can be used to attain success in a variety of other areas of life.

Ques 17. Which of these is a type of endurance?

A. Static
B. Specific
C. Dynamic
D. Relative

Ans. C

Solu. The capacity to maintain muscle activity for a prolonged amount of time is known as dynamic endurance. This is especially true for sports involving repetitive motions, such swimming and running. Static endurance is the ability to stay still for a long time.

Ques 18. Which type of coordinative ability is required in game like judo and wrestling.

A. Orientation ability
B. Coupling ability
C. Adaptation ability
D. Differentiation ability

Ans. C

Solu. Adaptation ability refers to the capability to adjust motions according to dynamic conditions, which is crucial in sports like judo and wrestling, where the scenario changes swiftly, and athletes need to adapt their strategies and techniques accordingly.

SECTION B

Ques 19. Enlist any two-exercise guideline by WHO for different age groups.

Ans. The WHO advises children and adolescents (5–17 years old) to engage in at least 60 minutes a day of moderate–to–intense physical activity. At least three times a week, one should engage in cardiovascular activity as well as bone and muscle strengthening activities.
Adults (18–64 years old): The World Health Organization recommends that adults perform muscle-strengthening activities two or more days a week in addition to 150–300 minutes of moderate-intensity aerobic activity or at least 75–150 minutes of vigorous-intensity cardiovascular activity per week.

Ques 20. How we can say that protein is an essential component of diet?

Ans. Because it is vital for the synthesis of hormones, enzymes, and other bodily substances, as well as for the maintenance and repair of tissues, protein is considered essential. Moreover, immune system performance, muscle growth, and the preservation of overall body structure all depend on it. Protein needs to be consumed through food since, unlike fats or carbs, the body cannot store it.

Ques 21. Mention the test performed on 9 to 18 yrs. of age group in SAI Khelo India fitness test and explain any one?

Ans. The 9 to 18-year-old SAI Khelo India fitness test includes the following tests:

Test of Sprint Speed for 50m
Test of Cardiovascular Endurance: 600m Run/Walk
Partial Curl-up Examination (Core Power)
Broad Jump Standing (Lower Body Strength)
Sit-and-Reach Test for Adaptability

Example: Sit and Reach Test (Flexibility): This test gauges how flexible the hamstrings and lower back are. To measure flexibility, the participant stretches their legs out while

sitting on the floor and gently reaches forward as far as they can. They retain this position.

Ques 22. List down the types of bone injuries.

Ans.

- A fracture is a simple (closed) or compound (open) crack in the bone.
- Dislocation is When a bone falls out of its joint, this happens.
- Tension fracture is a tiny fissure in the bone brought on by misuse or prolonged tension.
- Children frequently suffer from greenstick fractures, which are fractures in which the bone bends and splits.
- A bone fractured into several pieces is called a comminuted fracture.

Ques 23. What do you understand by the term goal setting.

Ans. Setting goals is the process of identifying specific, attainable objectives that one wants to achieve. It offers guidance, inspiration, and a standard by which to gauge advancement. The SMART criteria—Specific, Measurable, Achievable, Relevant, and Time-bound—are frequently followed when creating effective goals.

Ques 24. Define Flexibility and list down its type.

Ans. A joint's or a collection of joints' flexibility refers to its capacity to move across their whole range of motion. It is a crucial part of fitness, impacting how well one performs in a variety of physical activities and lowering the chance of injury.

Different Kinds of Flexibility

The capacity to maintain a stretch at one end of a joint's range of motion is known as static flexibility.
The capacity to controllably move a joint through its range of motion during active movements is known as dynamic flexibility.

SECTION C

Ques 25. Specify the purpose of specific sports programme organised for community services.

Solu. Particular sports initiatives run as part of community service programs seek to:

Encourage Physical Activity: To enhance health and wellbeing, promote physical activity and sports involvement.
Social inclusion aims to bring together various groups and promote harmony and collaboration within the community.
Talent Identification: Create avenues for young people to be identified and developed early on.
Raising Public Awareness: Inform people about the advantages of physical activity, well-being, and sports.
Minimize Antisocial conduct: Involve young people in positive activities to lessen the likelihood of antisocial conduct.

Ques 26. What are the health problem face by a woman due to female athlete triad in its sports and athletic performance.

Solu. The term "Female Athlete Triad" describes a trio of ailments that frequently afflict female athletes:

Low Energy Availability: Not consuming enough calories to meet energy needs, either in the presence or absence of disordered eating.
Hormonal imbalances causing irregular or nonexistent menstrual periods are known as menstrual dysfunction, or amenorrhea.
Reduced bone mass and an elevated risk of fractures as a result of inadequate dietary intake, particularly of calcium and vitamin D, is known as low bone density (osteoporosis).

These circumstances may result in:

higher chance of other injuries, including stress fractures.
chronic health conditions such as osteoporosis.

reduced athletic performance as a result of weakness and exhaustion.

Ques 27. Write in detail the aims and objectives of special Olympic Bharat.

Solu. As a component of the worldwide Special Olympics movement, Special Olympics Bharat seeks to use sports to empower people with intellectual disability. Among the goals and objectives are:

Sports Development: Offer children and adults with intellectual impairments year-round sports instruction and tournaments in a range of Olympic-style activities.
Inclusion and Acceptance: Use athletics to advance societal acceptance, understanding, and inclusion of people with intellectual disabilities.
Health and Fitness: By giving athletes access to regular exercise, medical examinations, and dietary instruction, we can help them stay healthier and more physically fit.
Skill Development: Help people with intellectual disabilities become more confident, socially adept, and sportsmanlike.
Empowerment: Give athletes the chance to compete in regional, national, and international competitions in order to help them reach their full potential.

Ques 28. Differentiate between nutritive and nonnutritive components of a diet on the basis of their functions.

Solu. Nutritive Components:

Proteins: Provide structural integrity to the body, aid in muscle growth, and repair damaged tissue.
Carbohydrates: Give you energy for daily tasks and strenuous exercise.
Fats: Help produce hormones and support cell structure. They also act as a concentrated source of energy.
Minerals and vitamins: Promote healthy bones, the immune system, and a number of metabolic functions.
Non-Nutritional Elements:

Water doesn't contain calories, yet it's necessary for metabolism, temperature regulation, and hydration.
Fiber doesn't supply you energy, but it does help with digestion, bowel motions, and cholesterol reduction.
Despite not supplying energy, antioxidants shield the body from the damaging effects of free radicals.
Phytochemicals: Plant-based molecules that have health advantages like decreasing inflammation, but do not supply nutrients.

Ques 29. With the help of suitable sports example explain the application of Newtons 3 third law in sports.

Solu. Newton's Third Law states: For every action, there is an equal and opposite response.

In sports, this law is widely obeyed. In basketball, for instance:

A player applies force to the ground by jumping from the ground to shoot or slam (action). The player can jump because the ground reacts by pushing them upward with an equal amount of force.
Likewise, when swimming:

A swimmer moves in the pool by pushing water backwards with their hands and feet (action) and being propelled forward by the water (reaction).

Ques 30. How we can enhance the performance with the help of self-talk and self-esteem.

Solu. Self-talk and self-esteem are psychological strategies that can considerably improve athletic performance.

Self-expression:

During tournaments, positive self-talk helps athletes stay focused, lower their nervousness, and increase their confidence. Encouragement words such as "I can do

this" or "Remain calm and focused" can support athletes in times of adversity by helping them stay focused and resilient.
Example: After missing a shot, a tennis player might utilize self-talk to maintain composure by concentrating on the next move rather than thinking back on the error.

Self-worth:

A strong sense of self-worth fosters confidence, which is necessary for optimal performance. Confident athletes are more willing to take chances, stay motivated, and learn from their mistakes. Setting and achieving realistic objectives, together with receiving regular positive reinforcement, can help build self-esteem and eventually enhance performance.
For instance, a self-assured athlete is more likely to persevere through difficult patches in a marathon because they have faith in their ability to finish great.

When combined, these mental techniques can improve concentration, willpower, and general athletic performance.

SECTION D

Ques 31.

I. Choose the function of boarding committee

A. To take teams to the venue of match
B. To provide them meals
C. To take care of their stay
D. To arrange opening ceremony

Ans.

Solu.

II. What is the work of ceremony committee

A. To take teams to the venue of match
B. To provide them meals
C. To take care of their stay
D. To arrange opening ceremony

Ans.

Solu.

III. Ground and equipment committee should not perform

A. To arrange teams match venues
B. To provide them meals
C. To take care of proper officiating
D. To make fixtures

Ans.

Solu.

IV. Why committees are required?

A. To organize the event is perfect manner

B. To distribute the work
C. To make the best use of resources
D. All of the above

Ans.

Solu.

(Questions for Visually impaired)

Ram is a secretary of state basketball association. He has given the responsibility to organize a subjunior national tournament. He wants to organize the event at large scale and start distribution the work in various committees. He delegates the duties to different individual with authority and responsibility.
(Answer the following questions on the basis of above paragraph)

I. Which committee is responsible to make the event awareness: -

A. Publicity Committee
B. Hospitality
C. Registration committee
D. Transports

Ans. A

Solu. The task of promoting the event falls to the publicity committee. To boost attendance and support for the event, this involves advertising, interacting with the public, and promoting the tournament through a variety of media platforms.

II. ……. is the process of identifying and grouping the work to be performed.

A. Planning
B. Directing
C. Organising

D. Controlling

Ans. C

Solu. The act of determining, classifying, and allocating responsibilities to people or groups in order to guarantee the efficient operation of a gathering or establishment is known as organizing. It entails developing a structure that clarifies tasks and authority.

III. The reception committee for the tournament is responsible for _____

A. Welcoming the participants
B. Arranging accommodation and meals for the participants
C. Proper upkeep of the venues
D. Welcoming the chief guest and spectators at the opening and closing ceremony

Ans. A

Solu. When participants arrive at the venue, the Reception Committee is in charge of welcoming and introducing themselves. They make certain that attendees are informed on the event's procedures and feel at ease.

IV. If the responsibility of a committee is to fix venue, date and timing of the sports events, it is a _____

A. Post meeting committee
B. Pre meet committee
C. During meet committee
D. All the above

Ans. B

Solu. Before the event starts, a pre-meeting committee is in charge of coordinating and arranging all the necessary details. This entails scheduling the sports event's location, dates, and times.

Ques 32.

I. The first paralympics was organise in

A.1960
B. 1970
C. 1965
D. 1985

Ans. A

Solu. 1960 saw the first official Paralympic Games, which were contested by athletes with physical disabilities, mostly veterans of war, in Rome, Italy. It was the first time the competition was formally staged in conjunction with the Olympic Games, and it has since grown into a significant global athletic occasion.

II. Special education is a branch of education that deals with

A. Educating children in special schools
B. Instructions designing for students with special needs
C. To provide opportunity of special education
D. More than one of the above

Ans. D

Solu. The term "special education" describes the targeted instruction and assistance given to kids who have developmental, cognitive, emotional, or physical challenges. It includes teaching kids in special schools as well as creating curriculum specifically for students with special needs, meeting each student's individual learning needs.

III. Why is it called the Paralympics?

A. The first competition was held in Paraguay
B. It was originally for paramilitary soldiers injured in WW2
C. The event runs parallel with the Olympics
D. It's an event for paraplegics

Ans. C

Solu. The term Paralympics comes from the Greek prefix "para," meaning "beside" or "parallel." The Paralympic Games began as a competition for athletes with physical disabilities and are held in tandem with the Olympic Games to represent equal priority.

IV. What is the motto of the Paralympic Games

A. Spirit in motion
B. Citius, Altius, Fortius"
C. "Faster, Higher, Stronger
D. Diversity, Equality, Inclusion"

Ans. A

Solu. The Paralympic Games' motto, "Spirit in Motion," embodies the participants' tenacity, fortitude, and enthusiasm as they compete, highlighting their successes and spirit in the face of adversity.

(Question for Visually Impared)

Read the paragraph and answer the following question The Paralympic Games are a major international multi-sport event involving athletes with a range of

physical disabilities, including impaired muscle power, impaired passive range of movement, limb deficiency, leg length difference, short stature, hypertonia, ataxia, athetosis, vision impairment, and intellectual impairment.
Dr. Ludwig Guttmann kownn as father of paralympic organized the first official Paralympic Games in Rome featuring 400 athletes from 23 countries.
The Paralympics have grown significantly over the years, now attracting thousands of athletes from over 100 countries. The Paralympic movement has played a vital role in challenging societal perceptions of disability and in promoting the rights and inclusion of people with disabilities worldwide.

I. What is the primary focus of the Paralympic Games?

A. To promote physical fitness among children
B. To involve athletes with a range of physical disabilities in competitive sports
C. To honor the history of the Olympic Games
D. To raise funds for sports organizations

Ans. B

Solu. The main goal of the Paralympic Games is to give athletes with different physical limitations a worldwide sporting arena on which to compete. It challenges societal perceptions of disability and inclusion while fostering their abilities, tenacity, and spirit of competition.

II. Who organized the first event that eventually led to the creation of the Paralympic Games?

A. Pierre de Coubertin
B. Dr. Ludwig Guttmann
C. Lord Zeus
D. Norabji Tata

Ans. B

Solu. The first official Paralympic event was held in Rome in 1960 under the direction of Dr. Ludwig Guttmann, who is regarded as the founder of the Paralympic Games. His goal was to use athletics to help spinal cord injured military veterans recover.

III. In which year were the first official Paralympic Games held?

A. 1948
B. 1952
C. 1960
D. 1964

Ans. C

Solu. Athletes from 23 different countries competed in the first-ever Paralympic Games, which took place in Rome, Italy, in 1960. A global sports movement for athletes with impairments got its start with this tournament.

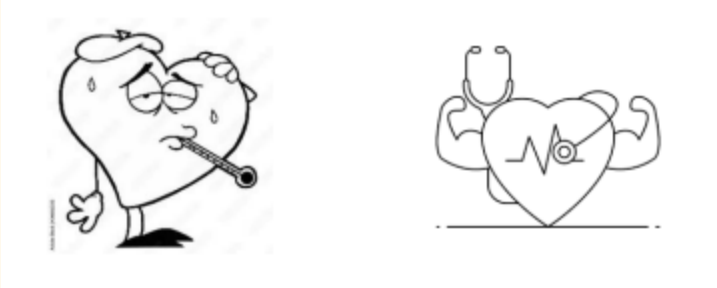
IV. Where were the first official Paralympic Games held?

A. Tokyo, Japan
B. London, United Kingdom
C. Rome, Italy
D. Sydney, Australia

Ans. C

Solu. Rome, Italy hosted the first-ever Paralympic Games in 1960. This occasion established the groundwork for the contemporary Paralympic movement, which still advocates for equality and inclusivity in sports across the globe.

Ques 33.



I. What is the primary effect of exercise on cardio respiratory system.

A. Decreased heart rate
B. Increased stroke volume
C. Decreased lung capacity
D. Decreased blood pressure

Ans. B

Solu. Exercise primarily affects the cardiorespiratory system by increasing the heart's stroke volume, or the volume of blood it pumps out with each beat. Frequent exercise improves overall cardiovascular efficiency by strengthening the heart and increasing its capacity to pump blood with each contraction. Improved oxygen delivery to muscles and a lower resting heart rate are two additional advantages.

II. What is stroke volume

A. The volume of blood ejected by the heart per minute
B. The volume of blood ejected by the heart per beat
C. The volume of blood in the ventricles at the end of diastole
D. The volume of blood pumped by the heart during exercise

Ans. B

Solu. The volume of blood that the heart pumps out of its left ventricle with each beat is referred to as the stroke volume. It is an important indicator of the heart's efficiency and rises with exercise as the heart gets stronger and more capable of pumping more blood in a given amount of time.

III. Cardiac output is

A. The volume of blood ejected by the heart per minute
B. The volume of blood ejected by the heart per beat
C. The volume of blood in the ventricles at the end of diastole
D. The volume of blood pumped by the heart during exercise

Ans. A

Solu. The entire amount of blood the heart pumps out in a minute is known as cardiac output. It is computed by multiplying heart rate (the number of beats per minute) by stroke volume, or the volume of blood pumped every beat. Exercise causes an increase in cardiac output, which is a vital sign of cardiovascular health since it meets the body's increased oxygen demand.

IV. Blood pressure is

A. The volume of blood ejected by the heart per minute
B. The force exerted by blood against the walls of arteries
C. The rate of blood flow through the veins
D. The amount of oxygen carried by red blood cells

Ans. B

Solu. The force that blood is exerting on the walls of blood vessels, especially arteries, is known as blood pressure. It is an important indicator of the cardiovascular system's health. The two values used to measure blood pressure are usually the diastolic (pressure in between beats) and systolic (pressure during a heartbeat).

(Question for blind)

Ramesh is an athlete of XYZ school. He used to do the 100m event for his school. He used to do hard work throughout the year to get his best performance. One

day he got injured in the winter season due to improper warming-up. He has been given first-aid before being sent to hospital.

I. Sprain is an injury of …

A. Ligament
B. Muscle
C. Bone
D. Joint

Ans. A

Solu. A sprain is a type of injury where the ligament, the tissue that joins the bones at a joint, is torn or stretched. Sprains are frequently caused by abrupt twists or collisions and affect the ankles, knees, and wrists.

II. In PRICE treatment I stands for

A. Iceing
B. Incline
C. Incision
D. Irritation

Ans. A

Solu. For the treatment of sprains, strains, and other ailments, employ the PRICE approach. I is for Icing, which helps with post-injury pain, swelling, and inflammation reduction. Protection, Rest, Ice, Compression, and Elevation are the letters that make up the acronym.

III. Abrasion is a

A. Type of fracture
B. Joint dislocation
C. Soft tissue injury

D. Internal injury

Ans. C

Solu. An abrasion is a soft tissue injury that happens to the skin's outer layer as a result of rubbing or scraping against a rough surface. It is a little wound that typically recovers without the need for extensive medical care.

IV. Why warming up is necessary

A. To avoid injuries
B. To increase pulse rate
C. To increase body temperature
D. All the above

Ans. D

Solu. It is important to warm up before engaging in physical activity for a number of reasons:

to prevent injuries by getting joints and muscles ready for the impending workout.
to quicken heart rate in order to supply muscles with more oxygen.
to raise body temperature, as this lowers the chance of strains and sprains and enhances muscular suppleness.

SECTION E

Ques 34. List down any four asanas used for prevention of Hypertension. Explain the procedure, benefits and contraindications of any one of them with the help of a stick diagram.

Solu. Four Yoga Poses to Prevent Hypertension:

Cobra Pose, or Bhujangasana
Position: Seated Forward Bend, Paschimottanasana

The Thunderbolt Pose, or Vajrasana
Standing in Corpse Pose
Yoga Focus: Cobra Pose, or Bhujangasana

Procedure:
Lie face down on the mat with your legs extended, feet together, and toes pointing back.
With your elbows close to your body, place your palms beneath your shoulders.
Using your back muscles, take a deep breath and slowly raise your chest off the floor, maintaining your pelvis on the mat.
Gaze slightly upward while keeping your shoulders relaxed and away from your ears.
Maintain the posture for 15–30 seconds while taking regular breaths.
Breathe out, then slowly return your upper body to the floor.
Benefits:
Lessens stress: Assists in easing tension and anxiety, which may be a factor in hypertension.
Enhances blood circulation, which can aid in the management of hypertension.
Strengthens the spine: Promotes better posture and a little stretch for the spine.
stimulates the digestive system: facilitates digestion and enhances general well-being.
Contraindications: This position should not be done by pregnant women.
It should not be performed by people who have recently had abdominal surgery or carpal tunnel syndrome.
Before trying, people with serious back ailments or herniated discs should speak with a doctor.

Ques 35. Discuss the purpose of Rikli & Jones fitness test and explain procedure of any two test batteries in detail.

Solu. The goal of the Rikli & Jones Fitness Test is to evaluate older persons' physical fitness levels with an emphasis on balance, strength, flexibility, and endurance. Its objectives are to detect people who are at risk of falling, enhance functional mobility, and encourage physical activity to improve health.

Examine the batteries:

Chair Stand Examination:

Measures the strength and endurance of the lower body.
Method: The participant places their feet flat on the floor and sits in the middle of a chair with their back straight.
They fully stand up and return to their seats when signaled.
The amount of time needed to finish five stands is noted.
Scoring: Shorter times indicate superior strength and endurance.
Test of Arm Curls:

Evaluation of upper body strength is the goal.
Method: The subject sits on a chair and holds a weight in their dominant hand—for example, 5 pounds for women and 8 pounds for males.
They raise the weight to shoulder level and then lower it back down when given the signal.
The quantity of curls finished in thirty seconds is noted.
Points: A higher number of curls corresponds to a stronger upper body.

Ques 36.Define strength and differentiate between Isometric, Iso-tonic and Iso-kinetic exercises. 1+4 Q37.What are the various types of friction? With the help of suitable example explain why friction is necessary in sports

Solu. Strength is defined as a muscle's or group of muscles' capacity to apply force in the face of opposition. It is essential for everyday tasks, sports performance, and injury prevention in addition to being a critical part of overall physical fitness.

Differentiating Between Types of Exercise:

Exercises with Isometry:

Definition: The muscles are contracted during these activities, yet the joint angle does not appear to move.
An illustration of this would be wall sits or plank holds, which involve contracting and holding the muscle in place.
Benefits: Increases muscle strength without requiring joint movement; beneficial for recovery.

Exercises that are Isotonic:

Definition: When performing these exercises, the muscles contract and lengthen or shorten in response to lifting or lowering weights.
For instance, during bicep curls or squats, the muscle contracts and varies in length.
Benefits: Through a full range of motion, strength and endurance are built.

The Isokinetic Workout:

Definition: These exercises require muscular contraction at a steady tempo, accommodating the resistance throughout the range of motion.
Example: Exercising the legs at a regulated speed while using specialized equipment (such as a dynamometer).
Benefits: Promotes muscle strength and recovery by offering the highest level of resistance throughout the activity.

Ques 37.What are the various types of friction? With the help of suitable example explain why friction is necessary in sports.

Solu. Different Friction Types:

Static Friction:

Friction that a stationary object has with its surroundings. It stops the thing from moving.
Example: Until sufficient force is exerted to overcome static friction, a basketball resting on the court will not roll.

Kinetic Friction

friction that develops between surfaces in motion.
Example: Kinetic friction slows down a basketball as it moves across the court.

Rolling Friction:

friction that develops when something rolls across a surface.
Example: The rolling friction experienced by a bowling ball as it rolls down the alley is often smaller than the sliding friction.

Fluid Friction:

Friction that happens when something passes through a liquid (or gas).
Example: Fluid friction causes a swimmer to move more slowly through the water.

Importance of Friction in Sports: Friction gives players the necessary grip, which is crucial in sports. For example, in basketball, players can pivot, jump, and change direction without slipping because of the friction between their shoes and the surface. In order to maintain control over the ball when dribbling and passing, friction between the ball and the player's hands is also essential. Athletes would find it difficult to maintain control, speed, and balance without enough friction, which would have a negative impact on both performance and safety.