

**Marking Scheme**  
**Physical Education**  
**Class XII**  
**(2018-19)**

1.	Endurance is the ability of the body to work for a long time without getting fatigue. Types of endurance are:- a- Aerobic endurance(Short -term endurance, Medium -term endurance, long -term endurance) b- Anaerobic endurance c- Speed endurance d- Strength endurance	
2.	Food intolerance means when an individual has difficulty in digesting a particular food. It is more common than food allergy. It can be tolerated a reasonable amount of food. . It is not life threatening.	
3	Asana is a physical Yoga posture that is formed to improve physiological functions of the body. Asana are helpful in reducing fatigue, tension and stress. It improves balance, flexibility and strength.	
4	Genetic-There is a strong genetic link of ODD development. Individuals with immediate family members who struggle with mental illness are more likely to have ODD than the members of the general population.	
	OR	
	Seeding is a process of playing in which some teams on the last year's performance are the given seeding. First four teams of previous year are not met before semifinal. But in few tournaments these seeding teams can play directly in quarter final.	
5	Advantages of weight Training 1. Increase muscle mass-Weight training always lead to increase in muscle mass and also increases strength of the muscles. 2. Improves body posture- Weight training develop bones and muscles and this help in possessing a good posture.	
6	Menstruation is the shedding of the facing of the uterus that occurs regularly in women from menarche to menopause. It produces bleeding from vagina that ends for 3-7 days. It is characterized by disruptions. a- Eumenorrhea b- Oligo menorrhea c- Amenorrhea	
	OR	
	Diabetes is a disease in which the glucose or blood sugar level increases. Lack of secretion of insulin by the gland is the major cause of diabetes. Our liver and endocrine glands play an important role in the regulation of sugar level in the blood.	
7	Advantages of Harvard step test. 1- This test requires nominal/minimal equipment and self-administered 2- Requires very less space and cost to administer. Larger group can be tested.	
8	Sarcolemma plays an important role in the muscle contraction process. It is a specialized cell membrane which surrounds striated muscle fiber cells. Sometimes called the myeloma, the sarcolemma is similar to a typical plasma membrane but has specialized functions for the muscle cell	
	OR	

	<p>Benefits:</p> <ol style="list-style-type: none"> <li>1. It enhances blood circulation in the hip joints and removes tension in the lower back.</li> <li>2. It helps in better digestion and releases the gas.</li> <li>3. It strengthens the intestine and other body internal organs in the abdomen.</li> <li>4. It helps in strengthening the back and abdominal muscles.</li> </ol>	
9	<p>Classification due to cause:</p> <ol style="list-style-type: none"> <li>1. Direct injuries due to impact of external forces.</li> <li>2. Indirect injuries.</li> <li>3. Overuse.</li> </ol> <p>Classification due to type of tissues</p> <p>Soft tissues - Sprain, strain, abrasion, laceration etc.</p> <p>Hard Tissue - Hard tissue injuries occurs in joints, bones &amp; Cartilage (fracture).</p>	
10	<p>Projectile-Any object that can be thrown, pitched, tossed, Flung, heard, fired in the air with some velocity and then allowed to be acted upon by the forces of gravity and possible drag.</p> <p style="text-align: center;">OR</p> <p>Cross Motor Skills-Involves the large muscles of the body that enable such functions – walking, kicking, sitting, lifting and throwing etc.</p> <p>Fine Motor Skills-Involves the muscles of the body such as finger and hands for activities like writing, gripping, and holding etc.</p>	
11	<p>Jung's classification of personality:</p> <p>(a) Judging - Extraversion and Introversion represents the source and cause of an individual every expression.</p> <p>(b) Sensing – Intuition sensing is a way in which an individual believes and understand the information made or female obtain directly from outside sources.</p> <p>(c) Thinking- Feeling - Thinking is talking a step in which an individual makes a decision mainly through judgment and logic. A decision based on feelings and emotions.</p> <p>(d) Judging – Perceiving – It is a way in which a person categorizes and decide the events of life and follows the plans defined by him.</p>	
13	<p>Self-Understanding:</p>	
14	<p>The main source of carbohydrates is carbohydrates are providing energy.</p> <p>Starch - It obtains from wheat, maize, beet, potato, rice, coneflower etc.</p> <p>Sugar – It obtains from Milk, beet, sugarcane, honey.</p> <p>Cellulose - It obtains from cereals, vegetables, fruits etc.</p> <p style="text-align: center;">OR</p> <p>The effects of exercise are well proved fact. The heart hypertrophy takes place.</p> <p>Long distance runner athlete cardiac hypertrophy is found more and that is also called athlete heart.</p> <p>The increase in size of the heart takes place with an increase of left ventricular cavity. It is found more in long distance runners and swimmers.</p>	

	In wrestlers, weightlifters and throwers the thickness of left ventricular walls is increased.	
15	<p>1. <u>Language and learning disorder</u> - This includes special children who have problem in listening speaking, writing, reading, reasoning and mathematical calculations.</p> <p>2. <u>Mental Retardation</u>: A person is considered mentally retarded if he has an IQ below 70 (Average IQ-100) and if they have difficulty in functional independently.</p> <p>3. <u>Head injury and stroke</u>- These injuries usually results in physical impairments</p>	
16	<p>Dislocation can be managed:</p> <p>a) Rehabilitation - This process is started after the splint or sling is removed. The purpose of designed exercises is to restore normal range of motion and strength amounts the joint.</p> <p>b) Immobilization: The joint should be immobilized with a sling for several weeks.</p> <p>c) Reduction - The doctor try to some gentle movements around the affected joint to help the bones back into position.</p> <p>d) Surgery – After unsuccessful reduction to settle the joint surgery can be used to move dislocated bone back into their correct position.</p>	
17	<p>Trajectory is known as the path distinguishes by a moving object. The path is curved :</p> <ol style="list-style-type: none"> <li>1. The factors affect a projectile’s trajectory.</li> <li>2. Angle of projection</li> <li>3. Initial velocity</li> <li>4. Gravity</li> <li>5. Air resistance</li> <li>6. Spin</li> </ol>	
18	<p>External motivation:</p> <p>This motivation is from the outside surroundings :</p> <ol style="list-style-type: none"> <li>1. Knowledge of the Goal – Learner must be made knowledge of result mentally ready towards the achievement of the goal.</li> <li>2. Knowledge of Result: It helps the person to know about his progress from time to time.</li> <li>3. Awards / Rewards - Rewards / Awards can be given in the form of Cash, Job or social recognition.</li> <li>4. Punishment – It can be given in the form of fear, rejection, pain or losing social status etc.</li> </ol> <p>Active participation.</p> <p>Audio-visual aids.</p> <p>Competition and co-operation</p> <p>Teacher – Taught relationship.</p> <p>Latest equipment and social environment.</p> <p>Purposeful teaching.</p>	
	OR	
	<p><b>Changes due to ageing:</b></p> <ol style="list-style-type: none"> <li>1 Joint flexibility decreases</li> <li>2 A bridge body mars</li> <li>3 Body composition</li> <li>4 Neuro sensing decreases</li> <li>5 Decrease in Neuromuscular functions.</li> </ol>	

	<p>6 Weak respiratory functions.  7 Increases blood circulation.  8 Diminishes cardiovascular efficiency.  9 Loss of endurance, strength and muscle mass.</p>													
19	<p>Fartlek training means speed play</p> <ol style="list-style-type: none"> <li>1. It is a training of athletes as to perform on natural surroundings.</li> <li>2. It is endurance training consists of many repetitions. The Fartlek route is generally free from polluted areas.</li> <li>3 No coach supervision is required.</li> <li>4 Mass participation if possible.</li> <li>5 The athlete can change pace from high running to jogging.</li> <li>6 Fartlek training is normally performed in country side.</li> </ol> <p>Every athlete is free to run at whatever speed he prefers.</p>													
20	<p>When the number of teams is 26 in knock out tournament.</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-left: 20px;">Number of team participating</td> <td style="text-align: right;">=26</td> </tr> <tr> <td style="padding-left: 20px;">Number of team in 1<sup>st</sup> half</td> <td style="text-align: right;">= 13</td> </tr> <tr> <td style="padding-left: 20px;">Number of teams in 2<sup>nd</sup> half</td> <td style="text-align: right;">= 13</td> </tr> <tr> <td style="padding-left: 20px;">Number of bye                    32-26</td> <td style="text-align: right;">= 06</td> </tr> <tr> <td style="padding-left: 20px;">Number of byes in 1st half</td> <td style="text-align: right;">= 03</td> </tr> <tr> <td style="padding-left: 20px;">Number of byes in 2<sup>nd</sup> Half</td> <td style="text-align: right;">= 03</td> </tr> </table> <p><b>Draw the fixture</b></p>	Number of team participating	=26	Number of team in 1 <sup>st</sup> half	= 13	Number of teams in 2 <sup>nd</sup> half	= 13	Number of bye                    32-26	= 06	Number of byes in 1st half	= 03	Number of byes in 2 <sup>nd</sup> Half	= 03	
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21	<p>Prevention of Asthma</p> <p>Mainly prevention is initiated by avoiding the triggers of asthma. Methods of its prevention are given ahead.</p> <ol style="list-style-type: none"> <li>1 By using air conditioners</li> <li>2 The windows of the air conditioned houses are mainly closed and this reduces the entry of airborne pollens that can cause asthma.</li> <li>3 Minimizing dust</li> <li>4 Minimize dust in the house and at working places. For example by removing carpeting and installing hardwood can reduce the dust.</li> <li>5 Clean regularly</li> <li>6 Keep your home and work place clean. This reduces the dust. Use of mask while cleaning can also prevent asthma.</li> </ol>													
22	<p><b>Factors affecting motor development:</b></p> <ol style="list-style-type: none"> <li>a. Heredity: The motor development largely depends on the genetic factors. Many attributes like height, body weight, muscle mass etc. are acquired from parents.</li> <li>b. Environment: Children are surrounded by home and school environment</li> <li>c. Physical Activity: Regular physical activities always promote motor development. The activities should be planned according to the age.</li> <li>d. Nutrition: Proper nutrition always leads to good motor development.</li> <li>e. Immunization: Timely immunization of mother and child always facilitate better sensory motor development.</li> </ol>													
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	<p><b>Friction:</b></p> <p>The Force acting along two surfaces in contact which opposes the motion of one body over the other is called the force of friction. It is very important in</p>													

	<p>sports. Larger the area of contact between the surfaces, greater is the force of friction.</p> <p><b>The friction is of three following types:</b></p> <p><b>Static Friction:</b> The opposing force that comes into play when one body tends to move over the surface but the actual motion has yet not started is called static friction.</p> <p><b>Limiting Friction:</b> Limiting friction is the maximum opposing force that comes into play when one body is just at the verge of moving over the surface of another body.</p> <p><b>Kinetic Friction:</b> Kinetic friction is the opposing force that comes into play when one body is actually moving over the surface of another body.</p>	
23	<p>Female Athletes Triad became apparent in 1990. It was considered that it is associated with disordered eating, secondary amenorrhea and bone mineral disorder. In 1997 American College of Sports Medicine made a report on Athletes Triad. These disorders can lead to diminishing of physical performance and cause of morbidity or mortality. It was suggested that imparting of knowledge of Athletes Triad can minimize the health hazards associated with it.</p> <p>The factors of athlete triad are explained below:-</p> <p><b>Osteoporosis</b> Symptoms</p> <ol style="list-style-type: none"> <li>1. Back Pain</li> <li>2. Bone Fracture</li> <li>3. Bad Posture</li> </ol> <p>Causes:</p> <ol style="list-style-type: none"> <li>1 Gender Differences</li> <li>2 Thyroid problems</li> <li>3 Improper Diet</li> <li>4 Amenorrhea:</li> </ol>	
24	<p>Barrow Motor ability test:</p> <p>Harold M Barrow developed a test of motor ability for college men as well as for high school boys. The test battery comprised of three items which are explained below:</p> <ol style="list-style-type: none"> <li><b>1. Standing Broad Jump</b> <ol style="list-style-type: none"> <li><b>a) Purpose of the Test:</b> To measure Power mainly but also agility, speed and strength.</li> <li><b>b) Facilities and Equipment required:</b> One 5x12 feet mat marked with take off line and parallel lines 2 inches apart as shown in the diagram.</li> </ol> <p><b>Instructions:</b> The subject must crouch before jump. Before the jump is taken the arms are swung. Three trials are given.</p> <p><b>Scoring:</b> The final score is the distance in inches from the best jump.</p> </li> <li><b>2. Zigzag Run</b> <ol style="list-style-type: none"> <li><b>a) Purpose of the Test:</b> To measure agility mainly but also speeds.</li> <li><b>b) Facilities and Equipment required:</b> One stop watch &amp; 5 flags or cones as shown in the diagram given below:</li> </ol> </li> </ol>	

	<p><b>Instructions:</b> The subject can take start from standing position. After the start running is done in a manner of figure of eight. Like this three circuits are completed.</p> <p><b>Scoring:</b> The final score is the time in seconds for three laps.</p> <p><b><u>Six Pound Medicine Ball Put</u></b></p> <p><b>Purpose of the Test:</b> To measure mainly strength of arm and shoulder girdle but also to measure power of arm and shoulder girdle coordination speed and balance.</p> <p><b>Facilities and Equipment required:</b> A space in the gymnasium hall with 90x25 feet. A 15 feet restraining line marked. One medicine ball weighing six pounds and one measuring tape.</p> <p><b>Instructions:</b> The subject must take the position before the restraining line. No overstepping is allowed after restraining line. The medicine ball is put not thrown.</p> <p><b>Scoring:</b> The final score is the distance of the best put in nearest foot.</p>	
25	<p>Physiological Factors Determining strength: The muscle strength is defined as the greatest amount of force that muscles can produce in a single and maximal effort. This depends on the following physiological factors:</p> <ol style="list-style-type: none"> <li>a) Muscle Cross Sectional Area: the cross sectional area is generally measured with girth measurement.</li> <li>b) Types of Muscle Fibres: The strength largely depends on the types of muscle fibres.</li> <li>c) Muscle Length: All individuals have different length of muscles.</li> <li>d) Age: The age cannot be controlled but people of all ages can develop their muscles.</li> <li>e) Gender: It is well known that gender does not affect the quality of our muscle, but does influence the quantity.</li> <li>f) Point of Tendon Insertion: Muscle strength is influenced by the point of tendon insertion of an individual.</li> <li>g) Nerve Impulses: The muscular strength also depends on nerve impulses and number of motor units.</li> <li>h) Energy Level : the energy for muscular contraction is derived from the breaking down of phosphogens (ATP &amp; CP)</li> </ol> <p><b>B. Physiological Factors Determining Speed:</b></p> <ol style="list-style-type: none"> <li>a) Nervous System and its Mobility: To generate more speed the muscles have to contract and relax at maximal speed.</li> <li>b) Composition of Muscle Fibres: Skeletal muscle is made up of bundles of individual muscle fibres. <ol style="list-style-type: none"> <li>(i) Slow twitch muscle fibres.</li> <li>(ii) Fast twitch muscles fibres.</li> </ol> </li> <li>c) Flexibility: Flexibility is referred as range of movement around the joints.</li> <li>d) Phosphogens Stores: To exhibit speed performance muscles need high amount of energy.</li> </ol>	

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Types of Coordinate Abilities:

A. **Coupling Ability:** Coupling ability of the body is considered as capacity of an individual to perform better coordination of different parts of the body. For example while dribbling a basketball, the coordination of both the limbs is required.

B. **Reaction Ability:**

Reaction ability is a skill to react quickly to a stimulus. For example chaser in Kho-Kho runs quickly after Kho is given.

C. **Balance Ability:** Balance ability is known as capability of an individual to maintain balance while the body is in motion. Even during distributed balance regaining the lost balance is known as balance ability.

D. **Orientation Ability:**

The orientation ability is a skill to determine and change the position in complex situations. For example defending an opponent in football, the position is changed according to the movement of opponent.

E. **Adaptation Ability:** Adaptation ability is the capability of person to change the movement on the basis of predicted changes. This ability is achieved after mastering the skills.

F. **Rhythm Ability:** Rhythm ability is to make out motor actions on a well-defined rhythm.

OR

**COPING STRATEGIES:**

Coping strategies are referred as thoughts and actions to counter a threatening situation.

Coping is a very complex process and it is mainly dependent on various variables like situation, the evaluation of the situation, and the resources available.

Coping in Sports: In sports many challenging situations occur and to tackle that situation coping strategies are used. Sometime how to bear pressure competition is most important.

The trained athletes cope successfully the unexpected events like a bad call from an official, weather conditions, rude behavior of opponents etc.

**Problem focused coping strategies :**

- a) Analyze the situation.
- b) Seek professional help
- c) Reframing
- d) Slow down pace
- e) Stay focused
- f) Realistic Goal-setting
- g) Proper Planning

**Emotion Focused Coping Strategies:**

- a) Physical Recreation
- b) Venting
- c) Seeking Support
- d) Humorous Attitude
- e) Denial
- f) Blame
- g) Be Positive