

**MODEL QUESTION PAPER (2020-21)**  
**Class: XII PHYSICAL EDUCATION (THEORY)**

**Maximum Marks: 70**

**Time: 3:00Hrs.**

1. The question paper consists of 30 questions and all are compulsory
2. Question 1-12 carry 01 mark each and are Multiple Choice Questions
3. Questions 13-16 carry 02 marks each and shall not exceed 40-60 words
4. Questions 17-26 carry 03 marks each and shall not exceed 80 -100 words
5. Questions 27 - 30 carry 05 marks each and shall not exceed 150-200 words

1. One gram of carbohydrate contains ..... calories:  
(A) 3 (B) 4 (C) 5 (D) 9

**OR**

Choose the type of aggression.

- (A) Hostile aggression (B) Instrumental aggression  
(C) Assertive aggression (D) All of these
2. In which of following tournament types of competition does each team play at least two games before being eliminated  
(A) Round robin (B) Ladder (C) Single elimination (D) Pyramid
3. For boys, the height of the bench in Harvard Step Test is  
(A) 15 inches (B) 20 inches (C) 24 inches (D) 30 inches

**OR**

What does "O" stand in 'OCEAN'?

- (A) Obesity (B) Openness (C) Optimise (D) Overload
4. Injury or damage of one or more ligaments in a joint is known as:  
(A) Sprain (B) Strain (C) Bruise (D) Incision
5. Two major components of load are:  
(A) Specificity and Volume (B) Intensity and Volume  
(C) Intensity and Progression (D) Continuity and Recovery
6. Which of the following activities does not contribute to the development of cardiorespiratory endurance?  
(A) Low impact aerobic (B) Jogging (C) 400 yard dash (D) Racket ball
7. Which of the following test is not used to measure muscular endurance?  
(A) Sit up (B) Flexed arm hang (C) Squat thrust (D) Distance walk

**OR**

Motor development is related to

- (A) Bone development (B) Muscles development  
(C) Both of the above (D) None of these
8. First ever Olympic medal by an Indian Women was received by:  
(A) Geeta Phogat (B) Mary Kom (C) Karnam Malleshwari (D) Sakshi Malik
9. When a joint reduces the angle between the bones at the joint, the movement is called:  
(A) Abduction (B) Adduction (C) Flexion (D) Extension
10. Carbohydrate loadings is beneficial for:  
(A) Endurance athletes (B) Diabetics (C) Strength athletes (D) Speed athletes



11. Given below are the two statements labeled Assertion (A) and Reason (R).  
 A. **Assertion (A)** : Lordosis is abnormal curvature in Jumber region of the spine.  
 B. **Reason (R)** : Its main cause is pregnancy.  
 In the context of 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.
12. Match List-I with List-II and select the correct answer from the code given below.

LIST-I		LIST-II	
Bye division in knock out		No. of team	
(i)	Ist bye is always given to the	(1)	Ist team of upper half
(ii)	IIInd bye is always given to the	(2)	IIInd team of lower half
(iii)	IIIrd bye is always given to the	(3)	Last team of lower half
(iv)	IVth bye is always given to the	(4)	Last team of upper half

Code

Code				
	(i)	(ii)	(iii)	(iv)
(a)	4	3	1	2
(b)	2	1	4	3
(c)	4	2	3	1
(d)	3	1	2	4

13. Identify the below given diseases and write their names.



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14. Identify the common lifestyle problems and write their names.



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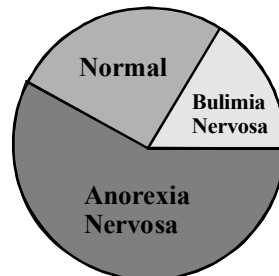
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15. What are the methods to improve flexibility?
16. How water is useful for us? Explain briefly.

**OR**

Enlist the training methods used to develop strength

17. Below given is BMI data collected from college girls aged 17-20 years on their weight and eating habits.



On the basis of the above data; answer the following questions:

- a. Majority of girls falls into which category?
  - (A) Bulimia Nervosa      (B) Anorexia Nervosa      (C) Normal      (D) None of these
- b. What happens in Anorexia Nervosa?
  - (A) Person stops eating because of fear of gaining weight
  - (B) Person eats a lot of but vomits out due to fear of gaining weight
  - (C) Person becomes binge eater
  - (D) All of these
- c. What could be the reason of these eating disorder?
  - (A) Person wants to look beautiful
  - (B) Person wants to maintain weight
  - (C) Both (A) and (B)
  - (D) None of these
18. Rohan of class IV has become short tempered. His aggression is increasing day by day, he annoys other and disobey his teachers and elders. His parent took him to the doctor where he diagnosed with a disorder.
 

Based on this case answer the following questions:

  - a. According to the symptoms he suffering from which of the following disorder?
    - (A) ODD      (B) OCD      (C) ADHD      (D) SPD
  - b. Causes for this disorder to a small child can be
    - (A) Low self esteem      (B) Poor social skills      (C) Poor concentration      (D) None of these
  - c. Disorder means?
    - (A) A mental or physical problem that interrupts normal function
    - (B) A problem for illness which affects someone's mind or body
    - (C) A dysfunctional factor that affects the physiology and/or psychology of an individual
    - (D) All of these
19. What is Speed? Explain the methods of speed development in detail.

**OR**

Explain the need and importance of Biomechanics.

20. Discuss the role of sports and exercise in holistic personality development



21. What are the methods in improve flexibility? Explain.

**OR**

Explain the factors effecting motor development.

22. List Newton's Laws of motion

23. Discuss any three reasons for less participation of women in sports

24. State the methods for deciding winners in league tournament.

25. Draw a league fixture of 7 teams using step method

26. Write down the corrective measure of any two postural deformities.

**OR**

Explain Rikli & Jones senior citizen fitness test.

27. There are 13 teams participating in a Knock-out basis. Explain to calculate number of 'Byes' with the help of diagram.

28. What do you mean by disability Etiquettes? Demonstrate few examples regarding guidelines for person suffering from disabilities

**OR**

Explain Obesity. How can it be managed through lifestyle and yoga?

29. Describe the benefits of yoga for healthy life.

**OR**

Explain the procedure and benefits of Bhujangasana and Pawanmuktasana.

30. Participation in sport result in the all-round development of personality. Justify.



## MODEL QUESTION PAPER SOLUTION (2020-21)

### Class: XII PHYSICAL EDUCATION (THEORY)

1. (B) 4 **OR** (D) All of these
2. (A) Round robin
3. (B) 20 inches **OR** (B) Openness
4. (A) Sprain
5. (B) Intensity and Volume
6. (C) 400 yard dash
7. (D) Distance walk **OR** (C) Both of the above
8. (C) Karnam Malleshwari
9. (C) Flexion
10. (A) Endurance athletes
11. (C) (A) is true but (R) is false
12. (D) 3 1 2 4
13. (A) Scurvy (B) Rickets/Bowlegs (C) Night Blindness (D) Beri Beri
14. (A) Diabetes (B) Obesity (C) Asthma (D) Hypertension
15. Flexibility means the ability to execute movement with greater amplitude or range. To maintain flexibility in games and sports, stretching exercises should be done. The following methods can improve flexibility:  
(A) Ballistic method (B) Static Stretching method  
(C) Dynamic Stretching method (D) Post isometric stretch
16. Water is a very useful component of our diet because blood comprises 90% of water. With the help of water through blood, the nutrients are carried to various parts of body. It is important for excretion of waste products. It regulates body temperature. Our body loses approximately 2% of our body weight or water per day. We compensate the loss of water by drinking water and by intake of food substances. It also functions as a lubricant and keeps the skin moist and protects the body from shock. About 20% of water intake comes from food and remaining intake comes from drinking water.

**OR**

Training methods used to develop strength:

(a) Isometric exercises (b) Isotonic exercises (c) Isokinetic exercises

17. a. (B) Anorexia Nervosa  
b. (C) Person becomes beings eater  
c. (A) Person wants to look beautiful
18. a. (A) ODD b. (D) None of these c. (D) All of these
19. According to Barrow and McGee, "Speed is the capacity of an individual to perform successive movement of the same pattern at a first rate". According to G.Schnabel, "It is the performance prerequisite to do motor actions under given conditions in minimum of time".

Methods to develop Speed:

1. Acceleration runs : Adopted to develop, especially in attaining maximum speed from stationary position, runs are repeated again and again with sufficient intervals. Sprinters usually achieve their maximum speed in 6 second after stationary position.
2. Pace runs : Running the whole distance of race at a constant speed, athletes run the race with uniform speed. In longer races such as 800m or above races, they must conserve their energy by reducing their speed.



Development of reaction time-reaction time is the time taken to respond to a stimulus. It can be developed by give practice or reacting repeatedly on particular signal. The signal can be given through a whistle, sound, light, etc.

- (A) By increasing stride length
- (B) By lifting the knees higher
- (C) By developing strength of the legs
- (D) By developing co-ordination between arms and legs.

**OR**

Following are the need & importance of Biomechanics in sports:

- (i) Improves performance in sports
- (ii) Development of improved sports equipment's
- (iii) Improve in training techniques
- (iv) Prevent sports injuries.
- (v) Helps in understanding human body
- (vi) Knowledge of safety principles
- (vii) Helps in research works
- (viii) Creates confidence in players
- (ix) Helps in maintaining healthy body.

**20. Role of sports and exercise in the overall personality development:**

- (i) **Physical development** : Games lead to proficiency in the neuro-muscular coordination well organized games are stimulant to physical growth. They shape the body and maintain the optimum health from childhood to adulthood and gain speed, strength, flexibility etc.
- (ii) **Mental Development** : Individuals learn to make judgments, utilize reflective and creative thinking to obtain knowledge about rules and regulations through sports and it also sharpens an individual's mind.
- (iii) **Social Development:** Players belonging to different places come closer to one another. Human relations are developed and social qualities like pair play, sportsmanship as well as courtesy are developed. Games are just like fields where seeds of high character are sown and a harvest of better man is reaped.
- (iv) **Emotional Development** : Games develop emotions like hope, Jealousy, distress, anger etc. and enable the individual to have proper control over these emotions.
- (v) It also helps in building confidence and higher self-esteem.
- (vi) Playing any kind of sport develops leadership qualities in an individual.

**21. Flexibility means the ability to execute movements with greater amplitude or range. To maintain flexibility in games and sports, stretching exercises should be done. The following methods can improve flexibility.**

1. **Stretch & hold method** : We stretch or joint to maximum limit and hold it for a few seconds before returning to the initial phase. The holding period must not be more than 3 to 8 sec. The method is also used for improving passive flexibility.
2. **Ballistic Method:** In this method the stretching exercise are done in a swing. So this is called the ballistic method. A proper warm-up should be done before these exercise. The stretching of the muscle can be done in a rhythm.
3. **Post-Isometric Method:** This method is based on the principle of proprio-ceptive neuromuscular facilitation. If a muscle is contorted maximally for a few seconds, then it is contracted maximally for a few second. Then after the contraction it remains in a static position for a few seconds for 6-7 seconds and gives very low resistance to that stretch. The duration of the stretch should be increased up to 8-10 seconds and repeated 4-8 times for each muscle group.



OR

There are many factors that effect motor development :

1. Nutrition
2. Immunization
3. Environmental factors
4. Physical activities
5. Biological factors
6. Postural deformities
7. Obesity

22. There are three Newton's Laws of motion

(i) **The Law of Inertia:** A body at rest tends to remain at rest. A body in motion tends to continue in motion with consistent speed and in the same direction unless acted upon by an outside force.

(ii) **The Law of Acceleration:** The velocity of a body is changed only when acted upon by an additional force.

(iii) **The Law of Counterforce:** The production of any force will create another force opposite and equal to the first force.

23. Factors responsible for less participation of women in the field of sports:

1. Lack of fitness and wellness
2. Female Athlete Triad
3. Lack of interest of spectators
4. Less no. of female coaches
5. Less media coverage
6. Personal safety
7. Less education of women
8. Lack of legislation
9. Male dominated culture i, the sports
10. Attitude of society towards women in sports participation

24. (A) British method : Divide the total points obtained by the total possible points and multiply by 100.

(B) American method : Divide the no. of games own by the total no. of games played and multiple by 100.

(C) Maximum score

Winners of the match = 2 points

Loser of the match = 0 point

Draw = 1 point

25. Number of teams (n) = 7

Rounds =  $n - 1 = 6$

Matches =  $7(7 - 1)/2 = 21$  matches

1-2					
1-3	2-3				
1-4	2-4	3-4			
1-5	2-5	3-5	4-5		
1-6	2-6	3-6	4-6	5-6	
1-7	2-7	3-7	4-7	5-7	6-7

26. Following are the corrective measures for common postural deformities:

Knock Knee

1. Horse riding
2. Doing Padmasana, Vakrasana, Akarn Dhanurasana, Vrikshasana
3. Standing with pillow between the knee.
4. Using walking calipers.
5. Straight leg knee press on the towel placed under the knee.

6. Side kicking the football.
  7. Walking on an outward inclining surface and applying pressure on the outer edge of the feet
- Flat Foot

1. Heel and toe walking
2. Ball under the feet game
3. Walking on sloping surface
4. Writing with legs
5. Walking or running on the sand.
6. Jumping on toe
7. Wearing proper shoes
8. Picking the pebble with help of feet

**OR**

The Rikli and Jones Senior Fitness Test is a series of simple tests that assess the functional fitness of elderly people. These tests are :

1. Chair Stand Test: To test lower body strength
2. Arm curl Test : To test upper body strength
3. Chair Sit and Reach Test: To test lower body flexibility
4. Back Scratch Test : To test upper body flexibility
5. 8-Foot Up and Go Test : To test agility
6. Walk Test (6 minutes) or Step in Place (2 minutes) : To test aerobic fitness

27. 
$$\begin{aligned} \text{Total no. of matches} &= \text{Total no teams} - 1 \\ &= 13 - 1 = 12 \text{ matches} \\ \text{Total no. of round} &= 2 \times 2 \times 2 \times 2 \\ \text{Digit 2 repeats four time, so no of round} &= 4 \text{ rounds} \\ \text{Total no bye : next power of 2} - \text{total no. of team} &= 16 - 13 = 03 \end{aligned}$$

#### **Bye Division**

Formula :  $\frac{NB-1}{2}$

$$\text{Total no. of byes in upper half} = \frac{3-1}{2} = \frac{2}{2} = 1 \text{ bye}$$

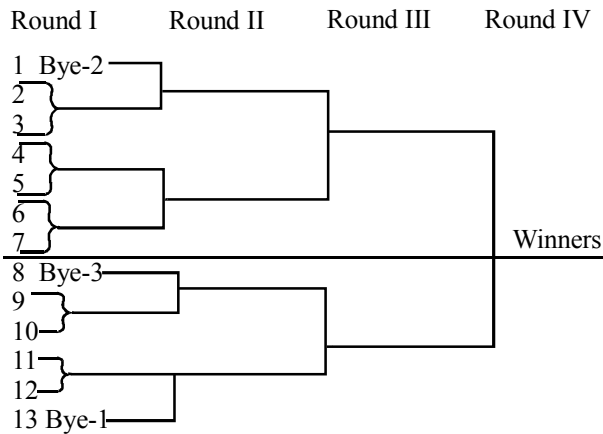
$$\text{Total no. of byes in lower half} = \frac{3+1}{2} = \frac{4}{2} = 2 \text{ bye}$$

#### **Team Division**

**Formula :**  $\frac{N+1}{2} \Rightarrow \text{No. of teams in upper half} = \frac{13+1}{2} = \frac{14}{2} = 7 \text{ teams}$

**Formula :**  $\frac{N+1}{2} \Rightarrow \text{No. of teams in lower half} = \frac{13-1}{2} = \frac{12}{2} = 6 \text{ teams}$





28. Disability etiquettes is a set of guidelines to deal with the people facing physical or mental disabilities. It was started as a clinical play on existing rule sheets. Written for non-disabled audiences that were seen as demeaning by civil right activists in 1970s. The term serves to communicate people with disabilities more respectfully in all types of situations. It refers to educate people regarding disabilities. It involves treating people with disabilities with respect and care, and try to bring them into a normal life.

#### Disability Etiquettes in General

1. Always respect the dignity of a disabled person, individuality and desire for independence.
2. Treat a person with disability in the same manner and with the same respect and courtesy as with others.
3. Speak directly to the person rather than through the friend, attendant or sign-language interpreter who may also be present.
4. Never speak about the person as if they are invisible, can't understand what is being said.
5. Don't put people with a disability on a pedestal or talk to them in demeaning terms.

**OR**

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health. It can be managed through adapting healthy lifestyle and yoga

1. Makes strong and active muscular and skeletal system.
  2. To improve mental health.
  3. To get rid of excess fat.
  4. Increases self-confidence and positive body image.
  5. Yoga makes our immune system stronger.
  6. Yoga also removes postural deformities.
29. Yoga is extremely effective in maintaining overall health and curing any disease or deformity.
1. **Prevent Cardiovascular Diseases** : Practice of asana helps to control cholesterol level, normalizes blood pressure and improves cardiovascular performance. Regular practice of asana improves blood circulation, lowers blood sugar level and hence reduces the risk of heart attack and cardiovascular diseases.
  2. **Prevents Digestive Disorders** : Asanas like Vajrasana and pawanmuktasana helps to provide relief from gas and constipation leading to a healthy digestive system.
  3. **Prevents Respiratory Disorders** : Yoga asanas are extremely effective for respiratory ailments. Asanas provide relief by clearing the nasal passage, stretching the chest and stimulating the lungs, thereby oxygenating the entire respiratory system.
  4. **Removes Postural Deformities** : Yoga asanas are highly effective in curing a large number of postural defects. Yoga asanas such as Dhanurasana, Sarvangasana, Halasana, etc are best corrective asanas to remove postural deformities.



5. Reduces stress and tension : Yoga asanas involve various exercises, meditation and breathing techniques that are beneficial for releasing stress and tension of body and mind. It boosts memory, concentration power, prevents stress, tension, anxiety depression and inculcates positive thinking.
6. Prevents Injuries : Injuries are common among athlete during training or competition. Adopting the practice of asana in their training routine helps to strengthen the muscles, tendons and ligament. It increases range of motion and thereby improves flexibility

**OR**

Bhujangasana is also known as Snake or Cobra Pose. It forms part of Surya Namaskar (sun salutation).

Procedure :

1. Start in the Prone Position by lying flat on your stomach. Make sure your feet are together on the floor and your forehead rest on the ground.
2. Place your hands (Palms Downwards) under you shoulders,
3. Keep your elbows parallel and close to your torso,
4. Take a deep breath in, slowly raise your head, chest and abdomen while keeping your navel touching the floor.
5. Pull your torso slowly off the floor with the support of you hands
6. Arch you back as much as possible, tilt your head back and lookup.
7. Hold this position for 10 to 30 seconds while breathing normally.
8. Exhale, bend your elbows and bring your torso down to the floor.

Benefits of Bhujangasana :

1. Improves the flexibility of spine.
2. Strengthens back, shoulders and arms.
3. Improves blood circulation throughout the body.
4. Helps to relieve stress and fatigue.
5. Improves respiratory system and helps to treat asthma.
6. Helps to manage diabetes.

Pawanmuktasana is also known as Wind relieving Pose. It can be done by one leg or both the legs. It relives gas a aids in digestion. It also cures digestion.

Procedure:

1. Lie flat on your back with extended legs.
2. Keep your legs together and place your arms beside your body.
3. Inhale and as you exhale, bring your right knee towards your chest.
4. Press your thighs on your abdomen with clasped hands.
5. Breath in again and as you exhale, lift your head and chest off the floor and try to touch your nose to the right knee.
6. Hold this position and take deep long breathes in and out.

Benefits of Pawanmuktasana :

1. Helps to release unwanted and toxic gas from digestive system. Thus, improves digestive functioning.
2. Prevents and cures diabetes.
3. Relieves indigestion, acidity and constipation.
4. Helps to relieve tension in lower back hips and things.
5. Soothes stiffness in spine while toning the abdominal muscles.

30. Games and sports are essential for the all-round development of personality. It is by participating in games and sports that we can develop and maintain our health, keep our body alert, active, youthful and energetic. Participation increases blood circulation and we get an increased supply of oxygen. This makes a person healthier. Only a healthy person can work long, hard and cheerfully. An unhealthy



person may not take much interest in work. Games and sports have additional benefits as they are played in groups and with a healthy competitive spirit.

Among many other things, they help to develop cooperation, quality of leadership, team spirit and a willingness to submit to, and further the rule of law. Games instill in participants the spirit of self-reliance, justice, fair play and sporting spirit. They make people bold, adventurous social, disciplined and more conscious of their responsibilities towards society and the nation. People participating regularly in games and sports have been found better equipped to fight superstitions, communalism, obscurantism and a narrow approach to issues of national interest. Games also help in overcoming feeling of violence, arrogance and superiority as these are purged by providing them a sufficient outlet. A sportsperson may not lose his or her temper and morale even in the face of defeat because he/she would take it coolly, calmly and then would try to perform better the next time.

Players know that victory and defeat are two aspects of the same coin. There is more joy in playing than in its end result. Thus, participation in sport results in the all-round development of personality.