

COMMON PRE BOARD EXAM 2017-18
MARKING SCHEME CLASS XII
PHYSICAL EDUCATION (SET 2)

1. Intramural: the activities which are organized within the walls (or) within the campus by an institution/school and the students of the same school participate in them

Extramural: The activities which are organized by an institution/school and the students of two or more schools participate in them. (1 MARK)

2. Balanced diet is that diet which consists of various constituents of food in accurate and appropriate quantity and quality according to the requirement of an individual.

(1 MARK)

3. Obesity is a physical condition in which a person has accumulated so much body fat that it might have a negative effect on her/his health. (1 MARK)

4. Physical disability means the limitations on a person's physical functioning. This may affect the person's movement, mobility, strength, speed and so on. (1 MARK)

5. Common postural deformities are

1. Spinal Curvature

a. Kyphosis

b. Lordosis

c. Scoliosis

2. Flat foot

3. Knock knee

4. Bow legs

5. Round shoulders. (1 MARK)

6. Fitness Index Score = $100 \times 180 \div 2 \times 60 = 50 \times 3 = 150$ (1 MARK)

7. Cardiac output is the amount of blood pumped from the heart per minute

Cardiac output = Heart Rate \times Stroke Volume (1 MARK)

8. Sport's medicine is a branch of sports science which deals with athletes or sportsmen in preserving their health increasing physical performance and preventing diseases.

-LA CAVA (1 MARK)

9. An Object thrown into the space either horizontally or an acute angle under the action of gravity is called projectile. The projectile is called trajectory (or) parabola.(1 MARK)

10. Self-Esteem- It is how you value and respect yourself as a person. It is real opinion that you have of yourself

“Confidence and Satisfaction in oneself”

- Merriam Webster Dictionary (1 MARK)

11. Strength is the ability of a muscle or a group of muscle to exert maximum force against a resistance in a single contraction. (1 MARK)

- 12.
1. Bhujangasana
 2. Paschimottasana
 3. Pavanamuktasana
 4. Ardha Matsyendrasana

Paschimottasana-

The intestine, gall bladder is smoothly pressed and stimulated, enhancing their function. It massages and tones the abdominal and pelvic organs and improves blood circulations. It also reduces belly fat and brings relief from constipation. (2+1=3)

13. OCD Refers Obsessive Compulsive Disorder means both obsession of thoughts and compulsion of action.

Obsessive thoughts-

1. Fear of germs and contamination.
2. Non-acceptance of any matter
3. Hostile behavior
4. Particular about symmetry and specific order

Compulsive Disorder:

1. Finicky about cleanliness.
2. Over conscious about arranging things.
3. Repeated action of checking.
4. Performing superstitions action repeatedly and getting relief after performing.

($1\frac{1}{2} \times 1\frac{1}{2} = 3$)

14. Weight training: It is type of exercise that builds the strength of specific and targeted muscles by lifting weight equipments like barbells and dumbbells.

1. Increases the strength of the targeted muscles by increasing the mass and also raises the level of endurance.

2. Increases in bone density.
3. Controlling weight-Since it increases muscle mass the body's resting metabolism is also heightened this makes the body burn more calories. Therefore, weight training gets rid of excess calories and controls weight.
4. Improves mental state- It makes the individual physically fit, active and healthy. Therefore, the person become self confident and high self-esteem and can deal with anxiety and stress more expertly. (1+2=3)

15. Brief the following

1. Family Environment
2. School
3. Culture (3X1=3)

16. Types of Motivation

Intrinsic Motivation- It is internal motivation. It occurs when person are compelled to do something out of pleasure. It comes by oneself.

Extrinsic Motivation- It is external motivation. It occurs when external factors compel the person to do something. For ex: rewards, praise, cash prize etc.

(1_{1/2} × 1_{1/2} = 3)

17. Frictions

1. **Friction** is a force developing on the surface of contact of two bodies and which opposes their relative motion
2. **Static Friction:** It is the resistive force that exists when one body tries to slide over the surface of another body without the actual sliding taking place.
3. **Dynamic Friction:** It is the opposing force acting on a body moving over the surface of another body. There are three types of dynamic friction

a. Sliding friction

When one body is actually sliding over the surface of another body

b. Rolling friction

When one body is actually rolling over the surface of another body

c. Fluid friction

The friction that act on a body which is moving through a fluid is called fluid friction (1/2 + 1/2 + 2 = 3)

18. There are six types of bone injuries

1. **Simple Fracture:** A broken bone in a single part of the body in the absence of a wound is called simple fracture.

2. **Compound Fracture:** This type of fracture is accompanied by damage to the muscles and skin and the bone usually protrudes out of the torn skin.
3. **Complicated Fracture:** Along with the bones, other parts of body such as tissues, nerves and arteries also get damaged
4. **Greenstick Fracture:** Bending of bones or slight crack is called greenstick fracture.
5. **Comminuted Fracture:** It is the type of fracture in which bone breaks into three or more pieces.
6. **Impacted Fracture:** In this type of fracture, shattered or fragmented pieces of a broken bone enter into another bone under the influence of an impact.

$$(6 \times \frac{1}{2} = 3)$$

19. Effect of exercise on muscular system

1. Change in Anatomy of the muscles
2. Increase in number of capillaries
3. Improving the strength of connective tissues
4. Improving Efficiency
5. Delaying fatigue
6. Activation of non-functioning fibres
7. Correct body posture
8. Improving of reaction time

Explain any one of above points

$$(8 \times \frac{1}{4} = 2 + 1 = 3)$$

20. Fixture of 11 Teams on knock-out basis

Total number of teams	=11
Number of teams in upper half	= $N+1 \div 2 = 11+1 \div 2 = 12 \div 2 = 6$ teams
Number of teams in lower half	= $N - 1 \div 2 = 11-1 \div 2 = 10 \div 2 = 5$ teams
Total number of byes	= $16-11=5$ byes
Number of byes in Upper half	= $NB-1 \div 2 = 5-1 \div 2 = 4 \div 2 = 2$
Number of byes in lower half	= $NB+1 \div 2 = 5+1 \div 2 = 6 \div 2 = 3$
Number of rounds	= $2 \times 2 \times 2 \times 2 = 4$ rounds
Number of matches	= $N-1 = 11-1=10$

Advantages of League Tournament.

1. Only strong or deserving team gets victory in the tournament.
2. Every team gets full opportunity to show its efficiency or performance
3. Sports and games can be more popular through league tournament owing to maximum number of matches.
4. Enough opportunities are available to the players to improve their performance.

5. The spectators also get good opportunity to watch the game for many days.

Disadvantages of League Tournament

1. It requires more time
2. It costs more
3. The teams coming from far , generally face more problems because such tournaments waste their time and money
4. It requires more arrangement for sports officials and teams.
5. Most of teams become psychologically down due to their defeat again and again.

$$(2+1\frac{1}{2}+1\frac{1}{2}=5)$$

21. Macro nutrients are

1. Carbohydrates
2. Proteins
3. Fats
4. Water

Role of Nutrition

1. Pre-competition:
 - a. Carbohydrate loading before competition helps in storing of glycogen which helps in extra energy during competitions.
 - b. Sufficient intake of fluid before competitions helps in prevention of dehydration.
2. During competition:
 - a. Small amount of carbohydrates at regular interval helps in maintain blood sugar level and reduces fatigue.
 - b. Frequent intake of fluids is beneficial to stay hydrated during high intensity level activities.
3. Post competition:
 - a. Initial intake of carbohydrate after competitions help in restoring glycogen.
 - b. To enhance muscle recovery, protein diet after few hours of competition is helpful.
 - c. A balanced diet containing of macro and micro nutrients post competitions helps in faster recovery and reduced chances of injury. $(4\times 1\frac{1}{4}=5)$

22. PRICE

P: Protection is meant to prevent further injury and partially immobilizing the injured area by using a sling, splint, or brace may also be a means of protection.

R: Rest is important to allow for healing. However, many sports medicine specialists use the term relative rest meaning rest that allows for healing, but is not so restrictive that recovery is compromised or slowed. A person should avoid activities that stress the injured area to the point of pain or that may slow or prevent healing.

I: Ice refers to the use of cold treatments, also known as cryotherapy, to treat acute injuries. Ice is recommended with the intent to minimize and reduce swelling as well as to decrease pain, although skin sensitivity or allergy to cold exposure may occur. If these symptoms occur the ice treatments should be discontinued.

C: Compression is the use a compression wrap, such as an elastic bandage, to apply an external force to the injured tissue. This compression minimizes swelling and provides mild support.

E: Elevation is recommended to help reduce the pooling of fluid in the injured extremity or joint. Controlling swelling can help decrease pain and may limit the loss of range of motion, possibly speeding up recovery time. (5×1=5)

23. Rikli and Jones senior citizens fitness test

1. **Chair Stand test-** to measure leg strength and endurance

Procedure- the subject is advised to sit on the chair with arms crossed around the wrists and hands are kept close to the chest. After this, the subject stands completely and then reaches again the same sitting position. This activity is repeated for 30 seconds.

2. **Arm Curl test-** to measure upper body strength.

Procedure- the subject sits on the chair keeping the back straight and holds weight in strong hand. The subject performs arm curls in 30 seconds.

3. **Back scratch test-** to measure range of motion of shoulder

Procedure- the subject is advised to stand initially. After this, one hand is placed behind the head and other arm is bent behind the back. Test administrator helps in guiding the subject about the alignment of the fingertips. If the tip of both index fingers touches, then the score is awarded zero. In case it is no, touching the gap is measured and this is awarded as negative score. While overlapping distance is given as positive score. Reading is taken twice and the best score is awarded.

4. **Eight foot up and go test-** to measure speed, agility and balance while moving

Procedure- a cone is placed 8 feet away from the chair which is placed away from the wall. On the command go the subject starts before sitting on the chair. The

subject is advised to walk briskly and turn around the cone and again sits on the chair. The time is measured for this whole activity. The two trails are conducted. The best trail is counted for scoring.

5. **Six minute walk test**- to measure aerobic fitness

Procedure-the walking course is marked in 50 yards (45.72 meters) rectangular area dimensions 45X5 yards.

(5×1=5)

24. Participation in physical activities

1. Reduces the loss of Muscle Mass
2. Helps in maintaining bone density
3. Slow down brain ageing
4. Reduces the risk of age related diseases
5. Improves muscular strength
6. Enhances the capacity of lungs
7. Improvement of flexibility
8. Reduction of Stress and Tension

Explain any five in detail

(5×1=5)

25. Causes of postural deformities

1. **Spinal curvature**: is caused by carrying excessive weight beyond capacity. Weak muscles cause the formation of spinal curvature.
2. **Kyphosis**: It is caused by malnutrition, illness, crowded, Deficiency of pure air, Insufficient exercise, Rickets, Carrying heavy load on shoulders, Unsuitable furniture, Weak muscles, Shyness among girls and habit of doing work by leaning forward.
3. **Lordosis**: It is caused by imbalanced diet, improper environment, improper development of muscle, Obesity and diseases affecting vertebrae and spinal muscles.
4. **Scoliosis**: Diseases in the joints of bones, under developed legs, Infantile paralysis, Rickets, Carrying heavy load on one shoulder, Unhealthy conditions like inadequate lighting arrangements, Unsuitable desk and wrong standing posture.
5. **Flat Foot**: The main causes of flat foot is weak muscles, Rabid increase in body weight, Improper shoes, Carrying heavy weight for long period.

Any five can be written

(5×1=5)

26. Methods to Develop Endurance

Continuous Training Method: In this method of training an exercise is performed for a long duration without any break and intensity remains low due to the the longer training period. The rate of heart beat remains in between 140-160 beats per minutes. The total duration training should not be less than 30 minutes. The duration of training can be increased according to the endurance ability of the sportsperson or athlete. Example: Cross country race and marathon race.

Interval training method: This training method is based on effort and recovery principle. During interval training, recovery period is given to the athlete after each speedy workout. Recovery period can be adjusted according to the efficiency of the athlete. The load can be increased by reducing the recovery period or by increasing the workout.

For an athlete of 400m the following example can be applicable

1. 1.400m race with 80% speed
2. Walking or jagging until his/her heart rate comes down to 120 to 140/minute approximately.
3. 400m race with 80% speed

The repetition depends upon the experience or capacity of an athlete. Recovery period and workout can be adjusted according to the level of an athlete.

(21/2 +21/2=5)