CBSE Class 12 Physical Education
Sample Paper 02 (2019-20)

Maximum Marks:
Time Allowed: 3 hours

General Instructions:

i. The question paper consists of 34 questions
ii. All questions are compulsory.
iii. Question 1-20 carry 1 mark and are multiple choice questions.
iv. Question 21-30 carry 3 marks each and should not exceed 80 -100 words each.
v. Question 31-34 carry 5 marks and should not exceed 150-200 words.

Section A

1. Which of the following is NOT an objective of planning in sports?
    a. Finding out the causes of failure
    b. Distribution of work
    c. Timely achievements of the targets
    d. Training of empires and coaches
2. What are intramural competitions?
    a. Competition within students of same institute
    b. Competition among citizens of different countries
    c. Inter-institute competitions
    d. Competition within same country
3. _____ Vitamin keeps eyes and skin healthy.

a. Vitamin C
b. Vitamin B
c. Vitamin A
d. Vitamin K

4. If BMI of a person is 28. It is considered as

a. Obese
b. Normal
c. Underweight
d. Overweight

5. Which of the following is NOT part of AAHPER test?

a. Pull-ups
b. 50 Yard Dash
c. Kraus Weber Test
d. Shuttle Run

6. Which of the following is NOT part of General Motor Fitness Test?

a. Medicine Ball Put
b. Zig-zag Run
c. Standing Broad Jump
d. 600 Yard Run-Walk

7. _____ is the ability of a muscle to exert force in a single muscle contraction or to overcome resistance.

a. force
b. flexibility
c. strength
d. acceleration

OR

When the body is working so hard that the demand for oxygen and fuel exceed the rate of supply and the suscles have to rely on the stored reserves of fuel is _____

endurance.

a. Aerobic
b. Strength
c. Speed
d. Anaerobic

8. Which of the following is NOT a disorder?

a. Having only one leg
b. Hyper activity
c. Too much sensitivity to cleanliness
d. Overeating

9. The symptoms of _____ are people doing repetitive behaviours, performing routine tasks over and again or having certain thoughts repeatedly.

a. ODD
b. ASD
c. ADHD
d. OCD

10. Which of the following in part of external motivation?

a. Hunger
b. Safety and security
c. Rewards and punishments
d. Self-esteem

11. The totality of sentiments, attitudes, ideas, habits, skills and behaviours of an individual is _____.

a. Personality
b. Motivation
c. Self esteem

d. Positivity

12. Who is called the founder of Yoga in India?

a. Sushruta
b. Patanjali
c. Araybhatta
d. Balmiki

OR

Obesity and Diabetes are _____.

a. Uncommon diseases

b. Incurable diseases

c. Lifestyle diseases

d. Psychological diseases

13. Which of the following is NOT part of female athlete triad?

a. Osteoporosis
b. Amenorrhoea
c. Menarche
d. Anaemia

OR

Which of the following is NOT part of four stages of motor development in children?

a. Later childhood

b. Infanthood

c. Adulthood

d. Early childhood

14. For every action, there is equal and opposite reaction. It is _____.

a. None of these
b. Newton’s second law
c. Newton’s third law
d. Newton’s first law

15. _____ is a type of movement which takes place when the angle decreased between the two bones attached to a joint.

a. Flexion
b. Extension
c. Adduction
d. Abduction

16. Heart size of the boys is _____ the girls.

a. Equal to
b. Smaller than
c. None of these
d. Bigger than

17. Activities in circuit training are (a) Step-ups (b) Stomach crunch (c) Squat ups (d) Yoga.

a. B and C
b. only D
c. only A
d. A, B and C

OR

Which of the following is NOT part of General Motor Fitness Test?

a. Medicine Ball Put
b. Zig-zag Run
c. Standing Broad Jump
d. 600 Yard Run-Walk

18. The amount of blood pumped into the aorta with every heartbeat is known as _____.

    a. Heart Pressure

    b. Stroke Volume

    c. Blood Pressure

    d. Blood Flow

19. _____ uses the smaller muscles of the hand, feet and face for more precise activities.

    a. Fine motor development
    b. Gross motor development
    c. Strong motor development
    d. Healthy motor development

20. The body will remain in its state of rest or of constant linear velocity unless it is acted upon by some external force. It is _____.

    a. Newton’s first law
    b. Newton’s third law
    c. None of these
    d. Newton’s second law

Section B

21. Define the term ‘sports training’.

OR

Differentiate isometric and isotonic exercises.

22. What do you mean by axis? Discuss various types of axes.

23. What principles should be forward for goal setting?

24. What is Motivation?

25. How can osteoporosis ruin a female athlete's career?

26. Briefly explain amenorrhea. How it is associated with women athletes?

27. What do you understand by female athlete triad and what are its components.

OR

Write briefly about menstrual dysfunctions and their effect on sports participation of female athletes.

28. What is the most famous test for the measurement of flexibility of young athletes?

29. What any three causes of sports injuries?

OR

Write any three effects of exercise on the cardiovascular system.

30. Write a short note on vitamin.

Section C

31. Discuss the various strategies to make physical activities accessible for children with special needs in detail.

32. Discuss the procedure, benefits and contraindications of Trikonasana and Ardha Matsyendrasana.

33. Explain any two methods of drawing fixture for single league tournament.

34. A trainer can improve the respiratory system with the help of exercises. Justify this statement.

OR

What are the effects of exercise on Respiration System? Write in detail.

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Solution

Section A

1. (d) Training of empires and coaches
   Explanation: Training of empires and coaches
2. (a) Competition within students of same institute
   Explanation: Competition within students of same institute
3. (c) Vitamin A Explanation: Vitamin A
4. (d) Overweight
   Explanation: Overweight
5. (c) Kraus Weber Test Explanation: Kraus Weber Test
6. (d) 600 Yard Run-Walk Explanation: 600 Yard Run-Walk
7. (c) strength Explanation: strength

OR

(d) Anaerobic Explanation: Anaerobic

8. (a) Having only one leg Explanation: Having only one leg
9. (d) OCD Explanation: OCD
10. (c) Rewards and punishments
    Explanation: Rewards and punishments
11. (a) Personality Explanation: Personality
12. (b) Patanjali Explanation: Patanjali

OR

(c) Lifestyle diseases
Explanation: Lifestyle diseases

13. (c) Menarche Explanation: Menarche

OR

(c) Adulthood

Explanation: Adulthood

14. (c) Newton's third law Explanation: Newton's third law
15. (a) Flexion Explanation: Flexion
16. (d) Bigger than
    Explanation: Bigger than
17. (b) only D Explanation: only D

OR

(d) 600 Yard Run-Walk Explanation: 600 Yard Run-Walk

18. (b) Stroke Volume
    Explanation: Stroke Volume
19. (a) Fine motor development Explanation: Fine motor development
20. (a) Newton's first law Explanation: Newton's first law

Section B

21. The term sports training denotes preparing sportspersons for the highest level of performance. Sports training is overall a scientific and systematic channel or process of preparing an individual for an event or activity or a particular task. According to Harre "Sports training is based on scientific knowledge, and a pedagogical process of sports perfection which through systematic effect on psycho-physical performance ability and performance readiness aims at leading a sportsman to top level of performance". According to Martin "Training in sports is a planned and controlled process in which for achieving a goal, changes in complex sports, motor performance ability to act and behaviour are made through measures of content, methods and organization".

OR

ISOMETRIC EXERCISE

Isometric exercises are those exercises, which are not visible. In fact, there are no direct movements, hence they can't be observed. In these exercises, work is performed but is not seen directly. In these exercises, a group of muscles carries out tension against the other group of muscles. For example, pushing against a study wall.

ISOTONIC EXERCISE

The literal meaning of the word isotonic is constant tension i.e., iso means constant ant tonic means tension. In this exercise the length of muscles changes (shortens or lengthens) during action along with tension in them. An isotonic exercise is a form of active exercise in which muscles contract and cause movement. There is no significant change in resistance throughout the movement, so the force of contraction remains constant. Such exercise greatly enhances joint mobility and helps improve muscle strength and tone.

S.NO.	Isometric Exercises	Isotonic Exercise
(i)	Less equipment required.	Sometimes equipment is required to perform them.
(ii)	In develops static strength.	It develops dynamic strength.
(iii)	It needs less time.	it needs a long time

22. An axis is a straight line around which an object rotates. Movements at the joints of human musculoskeletal system are mainly rotational and take place about a line perpendicular to the plane in which they occur. This line is known as axis of rotation. There are following types of axes of rotation:

    a. Sagittal axis: The sagittal axis passes horizontally from posterior to anterior. It is formed by the intersection of the sagittal and transverse plane. Sagittal axis passes from front to back.
    b. Frontal axis: The frontal axis passes horizontally from left to right. It is formed by the intersection of frontal and horizontal plane. Frontal axis passes from side to side.
    c. Vertical axis: The vertical axis passes vertically from inferior to superior. It passes straight through the top of the head down between feet. It is formed by the intersection of sagittal and frontal plane. It is also known as longitudinal axis. It is the longest axis.

23. Principles to be followed for goal setting are

i. Make goals specific, measurable, and observable.

ii. Clearly identify time constraints.

iii. Use moderately difficult goals; they are superior to either easy or very difficult goals.

iv. Write goals down and regularly monitor progress.

v. Use a mix of process, performance, and outcome goals.

24. Motivation in sports can be said to make a difference between a mediocre career and one which is destined for greatest. If you reach the highest level of motivation in sports, you always considered to be in the zone. In order for an athlete to reach this point he/she has to work extra hard. Motivation is thought to be a combination of the drive within us to achieve our aims and the outside factors which affect it. With this in Factors associated with motivation- Smart, Measurable, Agreed, Realistic ,Time related ,Exciting, Recorded.

25. Osteoporosis is a disease of the bones. It happens when you lose too much bone; make too little bone or both. As a result bones may break from a minor fall. Estrogen is lower in case of female athletes. Low estrogen levels and poor nutrition, especially low calcium intake, can lead to osteoporosis . Osteoporosis is a weakening of the bones due to the loss of bone density and improper bone formation. This condition can ruin a female athlete's career because it may lead to bone fractures and other injuries,

26. Amenorrhea refers to the absence of menstrual It may be either primary meaning woman has never developed menstrual periods) or secondary (absence of menstrual periods in a woman who was previously menstruating). There are many reasons responsible for amenorrhea including extensive exercise and improper diet. Exercising intensively and not consuming enough calories can lead to decreases in hormones that result in a girl’s periods becoming irregular or stopping altogether. The absence of a menstrual period for more than 6 months. Anemia:- Resulting from the inadequate nutrition Exercising intensively and not consuming enough calories can lead to hormonal imbalances that result in girl's periods becoming irregular or

stopping altogether.

27. The Female athlete triads syndrome of three related conditions generally seen in teenage or adult female athletes who aren't meeting their energy requirements, which ultimately leaves them undernourished.

    The three components of the female athlete triad include

    OR

    Menstrual Dysfunction means abnormal bleeding and irregular menstrual cycle. Normally a menstrual cycle lasts 3 to 7 days and occurs every 22 o 35 days. During menstrual dysfunction, women often complain of headache, back pain, fatigue, cramps, tiredness etc.

    Due to participation of women in physical fitness and competitive endurance sports, the incidence of menstrual dysfunction has increased. Long distance running and other sports may lead to alterations in androgen, oestrogen and progesterone hormones, which in some women may directly or indirectly result in menstrual dysfunction.

    This not only hampers their physical performance but also challenges them psychologically. During these days, women should be more careful about their cleanliness, hygienic habits, diet etc.

    i. Disordered eating and anemia (Energy deficits)
    ii. Amenorrhea (Menstrual irregularities)
    iii. Osteoporosis (Decreased bone density)
    iv. A female athlete can exhibit symptoms of one, two, or all three parts of the triad.

28. Sit and reach test is the most famous test for the measurement of flexibility. It specially measures the flexibility of the lower back and hamstring muscles.
    Equipment: A testing box of 21 inches, scale attached to its top.
    Procedure: After removing shoes a person sit with straight knees by placing feet against the testing box. The soles of the feet must touch the box. Now place your hands one other and try to reach forward along the measuring scale as far as possible and hold it there for 1-2 seconds. Then the distance is recorded.

Scoring: The subject is given three trials. The highest score is recorded to the nearest centimeter as the distance reached by the hands.

29. To effectively diagnose, rehabilitate and ultimately prevent subsequent injuries, a sport therapist

OR

The effects of exercise on the cardiovascular system are

i. Anatomical Factors: These are related to make up of the body. Leg length differences and cause injuries to ankle, hip and back.
ii. Age related causes As the body ages, it changes. It is less able to produce force, recovers slower and soft tissues lose the ability to stretch. Therefore it is more prone to injury.
iii. Training related cause's Excessive repetitive loading of the tissues is needed for successive adaptation. However without suitable recovery, tissues never have the chance to adapt and can fail.
iv. Cardiac output is the amount of blood pumped by the heart in 1 min. This increases directly with increasing exercise intensity.
v. The heart rate increases from a resting rate of 72 beats / min to 150 beats / min or even more.
vi. The stroke volume, meaning the amount of blood pumped into the Aorta with every heartbeat, increases from a resting volume of 70-90 mL to 100-120 mL per beat.

30. Vitamins are complex compounds of carbon and essential for normal functioning of body. It is important for metabolism of fats and carbohydrates and helps to repair and maintenance of various tissues. Vitamins are natural substances found in plants and animals and known as Essential nutrients for human beings. Human body uses these substances to stay healthy and support its many functions. There are two types of vitamins: water-soluble and fat-soluble. Deficiencies of vitamins and minerals may be caused by disease states such as mal absorption.

Section C

31. The following strategies should be taken into consideration to make physical activities accessible for the children with special needs:

    a. Medical check-up: if we want to make physical activities accessible for the children with special needs, we need to understand the type of disabilities of children and for this purpose complete medical check-up of the children is required. Because without complete medical check-up, the teachers of physical education cannot come to know about the type of disability child is facing.
    b. Activities based on interests: Physical activities must be based on interest, aptitudes, abilities, previous experience and limitations of children with special needs. The teachers of physical education should have deep knowledge of limitations, interest and aptitudes of children.
    c. Different instructional strategies: A variety of different instructional strategies such as verbal, visual and peer teaching should be used for performing various types of physical activities. By this children get opportunity to learn by their own and become independent.
    d. Modification of rules: Rules can be modified according to the needs of the children. They can be provided extra time or attempt to perform a physical activity.
    e. Specific environment: For special needs children the area should be limited. In case of children who have autism, they must be provided specific area because they may need some time to relax.

32. Procedure of Trikonasana: First of all stand with your legs apart. Then raise the arm sideways up to the shoulder level. Bend the trunk sideways and raise the right hand upward. Touch the ground with left hand behind left foot. After sometime, do the same asana with opposite arm in the same way.

    Benefits of Trikonasana:

    Contraindications of Trikonasana:

    Procedure of Ardha Matsyendrasana: the left heel is kept under right thigh and the right leg is crossed over the left thigh. After that hold the right toe with left hand and turn your head and back to the right side. In this position move the trunk sideways.

Then Perform the same sasna in the reverse position.

Benefits of Ardha Matsyendrasana:

Contraindications Ardha Matsyendrasana:

a. It strengthens the legs, knees, arms and chest.
b. It helps in improving digestion and stimulates all body organs.
c. It increases mental and physical equilibrium.
d. It reduces stress, anxiety, back pain and sciatica.
e. It helps in increasing height.
f. It helps in reducing obesity.
g. It enhances blood circulation.
h. It is also helpful in reducing extra fat around the waistline.
i. If you are suffering from diarrhea, low or high blood pressure, back injury or migraine, avoid the practice of trikonasana.
j. The individuals having cervical spondylosis should not perform this asana.
k. It keeps gall bladder and prostate gland healthy.
l. It enhances the stretch ability of back muscles.
m. It alleviates digestive ailments.
n. It regulates the secretion of adrenaline and bile and thus is recommended in yogic management of diabetes.
o. It is also helpful in treating sinusitis, bronchitis, constipation, menstrual disorder, urinary tract disorder and cervical spondylitis.
p. Women, who are two or three months pregnant, should avoid practicing this asana.
q. The individuals who suffer from peptic ulcers, hernia, and hypothyroidism should practice this asana under expert guidance.
r. The individuals who have the problem of sciatica or sleep disc may benefit from asana but they need to take great care while doing this asana.

33. There are three methods of drawing fixture for single league tournament:

    i. Cyclic method: Suppose the number of teams = 8
    Number of matches = 28 matches

Number of Rounds = n – 1 = 8 – 1 = 7

If number of teams participating are in even number i.e., 2, 4, 6, 8, etc, then number one is fixed and other numbers are rotated clockwise.

Round I	Round II	Round III	Round IV	Round V	Round VI	Round VII
8 ↔ 1 7 ↔ 2 6 ↔ 3 5 ↔ 4	7 ↔ 1 6 ↔ 8 5 ↔ 2 4 ↔ 3	6 ↔ 1 5 ↔ 7 4 ↔ 8 3 ↔ 2	5 ↔ 1 4 ↔ 6 3 ↔ 7 2 ↔ 8	4 ↔ 1 3 ↔ 5 2 ↔ 6 8 ↔ 7	3 ↔ 1 2 ↔ 4 8 ↔ 5 7 ↔ 6	2 ↔ 1 8 ↔ 3 7 ↔ 4 6 ↔ 5

In case number of teams participating are odd number i.e., 1, 3, 5, 7 etc, then Bye is fixed, and all other teams rotate clockwise.

ii. Tabular method: In this method, the fixtures are drawn in tabular form. The number of columns shall be drawn horizontally as well as vertically. The number of columns depends on number of teams, i.e., even or odd.

For even number of teams, the number of columns shall be n + 1 and byes shall not be given. Whereas for odd number of teams, number of columns shall be n + 2 and bye shall be given.

Procedure for drawing columns:

I. Draw required number of columns horizontally and vertically.

II. Draw a line diagonally from the left topmost corner to the opposite right bottom corner.

Fixture for 8 teams

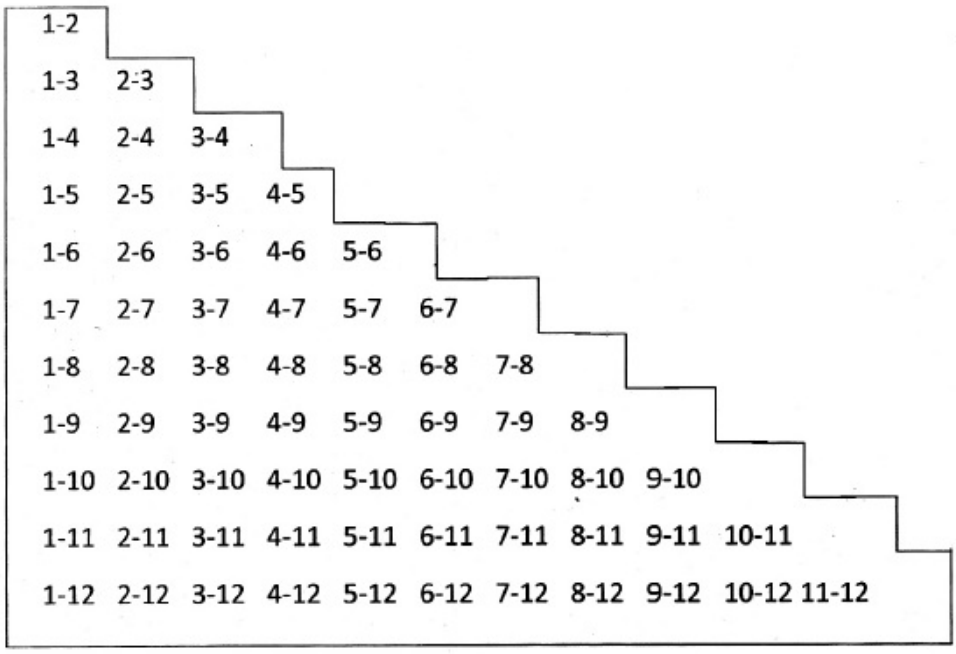
Number of columns n + 1 = 8 + 1 = 9

Number of rounds n – 1 = 7

The numbers that are entered in the squares indicate the particular round in which the concerned teams have to play. Enter the number serially in horizontal column from number 1 onwards.

	A	B	C	D	E	F	G	H
A		1	2	3	4	5	6	7
B			3	4	5	6	7	2
C				5	6	7	1	4
D					7	1	2	6
E						2	3	1
F							4	3
G								5
H								

iii. Stair case method :- in stair case method the fixture are made just like a ladder or a stair case in this method no bye is given to any team and there is no problem of even or add number of teams.



34. The respiration system consists of organs responsible for taking in oxygen for respiration and releasing carbon dioxide and water vapor, which are the waste products formed during respiration.

    The passages in the nose, windpipe (trachea), bronchi, lungs and air sacs are the main organs of the respiratory system. Trainer can improve the respiratory system with the help of exercise by

OR

Effects of exercise on respiratory system

i. Increasing the lung volume and capacity Vital capacity, which is the maximal volume of air? Forcefully expired after a maximal inspiration, in a normal untrained person may be 3-4 litres, but in a trained athlete this goes up to 5-6 liters. Reducing the breathing frequency In a normal untrained individual, the resting breathing frequency is about 12-20 breaths/min, whereas in trained athletes, it comes down to 7-8 breaths/min.
ii. Maximizing the minute ventilation Maximum minute ventilation in an untrained

individual is about 100 limits, whereas in trained athletes it increases to more than 150-160 limit. Increasing the tidal volume In an untrained individual, tidal volume is about 500 mu breath.

iii. Increasing the ventilator efficiency normally, 15 L of air is required to get 1 L of oxygen but a trained individual gets the same amount of oxygen, i. e. one liter, from less air i. e. 12 L. active for diffusion. The size of the alveoli is also increased, which provides more space for diffusion of gases such as oxygen (02) and carbon dioxide ($C0_2$).

iv. Strengthens will power to push beyond the capacity of regular training.

v. Decreases rate of respiration during exercise and at rest.

vi. Strengthen muscles of Diaphragm and chest.

vii. Increase in Tidal capacity.

viii. Activates unused Alveoli since more oxygen is required for endurance activities.