CBSE Question Paper 2018

Class 12 Physical Education

General Instructions:

- The Question paper consists of 26 questions.
- All questions are compulsory.
- Answer to 1 to 11 questions carrying 1 mark should be in approximately 10-20 words.
- Answer to 12 to 19 questions carrying 3 marks should be in approximately 30-50 words.
- Answer to 20 to 26 questions carrying 5 marks should be in approximately 75-100 words.

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1. **What do you mean by 'Fixture'?**

   Ans:

   - The organized method in which teams participate in any tournament is a fixture.
   - Fixture means arranging the matches in a tournament with details of venue, date and time.
   - Fixture is a procedure to set a sequence of matches for participating teams. (Any one)

2. **Why does the weightlifter's diet include lots of proteins?**

   Ans:

   - Proteins helps in forming new tissues and repairing the broken tissues.
   - To maintain strong ligaments and tendons needed for muscle growth. (Any one)

3. **What is 'Hypertension'?**

   Ans:

   - Increased blood pressure is hypertension.
   - Hypertension is a condition where the pressure of blood against the wall of arteries is too high (Any one)

4. **What do you understand by 'Physical Disability'?**

   Ans:

   - Limitation on an individual's physical functioning.
   - Motor deficiency or sensory impairment that affects the mobility and manual

skills is physical Disability.

(Any one)

5. **What is the main cause of 'Scoliosis'?**

   Ans:

   - injury of the bones and joints
   - faulty posture
   - weakness or paralysis of the muscles
   - diseases like TB or Rickets
   - Carrying/lifting heavy loads
   - Heredity

     (Any one cause)

6. **What is 'Amenorrhea' in female athlete triad?**

   Ans:

   - Amenorrhea is the absence of menstruation/menstrual periods in a woman for more than 3 months.
   - Or a girl above age of 18 years who has not begun menstruating
   - Unnatural absence of menstrual cycle for more them 3months. (Any one)

7. **What do you know about the term 'cardiac output'?**

   Ans:

   - Cardiac output is the total volume of blood pumped by the heart in one minute.
   - Cardiac output = Heart rate x stroke volume

8. **What type of fracture is known as Greenstick Fracture?**

   Ans: Greenstick Fracture is a bend or crack in a bone usually found in children.

9. **What do you mean by 'Kinesiology'?**

   Ans:

   - Kinesiology is the branch of physiology that studies mechanics and anatomy in relation to movement
   - Is Science dealing with inter relationship of physiological process and anatomy of human body with respect to movement. (Any one)

10. **Define the term 'Emotions'.**

    Ans:-

    - Emotions are feelings which result in physical and psychological changes that influence our behaviour

- Emotions are strong feelings deriving from one's circumstances, moods or relationship with others (Any one)

11. **Explain the term 'Sports Training'.**

Ans:-

- Process of preparation, in sports person to achieve a desired goal is called sports training.
- A technical and systematic process of training a sports person, to achieve the utmost level of performance is called sports training. (Any one)

12. **Neman was a Class VI student. He used to bring junk-food in his lunch-box daily. His teacher observed that he was neither concentrating on his studies nor actively participating in physical activities. In this matter, he had a talk with his parents and came to know that he refuses to eat roti, dal, fruits and vegetables. Due to this he is facing these problems.**

Based on the above passage, answer the following questions:

a. **What types of problems was Naman facing?**

Ans: Lack of concentration, inactiveness, lack of Physical activity (Any one)

b. **Why should junk-food not be recommended?**

Ans: -

- Junk food does not contain the required nutrients for healthy life.
- It leads to overweight and other health problems.
- Adversely affects the growth and development. (Any one)

c. **What values has his teacher shown in this matter?**

Ans: concerned, helpful, dedicated, caring, inspiring (Any one)

13. **Write briefly about some considerations of fluid intake pre, during and post competition that affects the sportsperson's performance.**

Ans:

<u>Pre competition:</u>

- Liquid food can be digested much quicker and absorbed faster
  Eg. Fluids like milkshakes, yogurt/curd, vegetable soups etc.

During competition:

- Energy drinks help maintain blood volume, regulate body temperature, allow muscle contraction.

- Water helps in replacing fluids lost in sweat
- Fluids help in maintaining muscle glycogen and blood sugar level

Post competition:

- Protein drinks, Yogurt, fruit juices and water
- helps in preparing worn out tissues
- -Restoring fluids and Electrolytes lost in sweat
- help in refueling the muscle and liver glycogen (any 1 point for each)

14. **What are the benefits of physical activities for children with special needs? Explain.**
    Ans:
    - physical improvement
    - Reduce risk of health complications
    - Mental improvement
    - Behavioral patterns
    - Improve self-esteem and develop self confidence
    - Reduce level of anxiety, stress and depression
    - Cognitive benefits
    - Better emotional and psychological health (explain any 3)
15. **How does participation in Games and Sports contribute to the psychological development of women athletes in India? Explain.**
    Ans:
    - gender role orientation
    - Self-image and body image
    - Self confidence
    - Self esteem
    - Positive aggression
    - Competitiveness
    - Overcome depression
    - Emotional and mental balance (explain any 3)
16. **Write briefly about menstrual dysfunctions and their effect on sports participation of female athletes.**
    Ans:
    - Menstrual dysfunction means the irregularity and uncertainty in menstrual cycle

of women

Effect on sports participation

- Athletic training and exercise neither affect the menarche nor menstrual periods.
- Heavy and intense training program may result in amenorrhea.
- Exercise is beneficial in relieving pain (dysmenorrhea)
- Sometimes Strength decreases during menstrual cycle and affects the performance
- Less hemoglobin affected oxygen intake, hence Sports Performance is affected
- Uncertainty in menstrual cycle may cause stress & anxiety.

17. **What do you understand by 'First-Aid'? How will you manage joint injuries? Explain.**

Ans:

- First- Aid is the immediate and temporary care given to a victim of accident or sudden illness before the arrival of the Doctor.
  Joint Injuries- Dislocation of the joints - in which adjoining bones are displaced from their normal position.
  Management:
- call for immediate medical help
- Do not move the joint to replace it.
- Keep the person in a comfortable position.
- Apply cold packs around the area to reduce swelling.
- immobilize the area with a splint
- Pain killer as advised by doctor. (Any 2 points)

18. **What do you understand by Sports Medicine? Discuss briefly about the scope of Sports Medicine.**

Ans:

- Medical knowledge applied to sport with the aim of preserving the health of the athlete while improving the athlete's performance is Sports Medicine.

OR

- Sports Medicine is related to such human problems which usually arise during training and competition in sports and Games. (any one)

- Scope:
- human anatomy and physiology
- Sports and first aid
- Prevention of sports injury
- Rehabilitation
- Female problem associated with women
- Sports performance and Ageing
- Scientific promotion of sports and games
- Fitness for sports
- Illness caused by environment, physiological and psychological disturbances.
- Sports nutrition
- Methods of detecting doping.
- Sports and traumatology
- Physiotherapy (explain any two)

19. **What are the factors affecting Self-Esteem and Body Image? Explain.**

    Ans:

    - Puberty and Adolescent period (body undergoes no. of changes.)
    - Media image (comparing with media images)
    - Family and Society(can have both positive and negative effect on body image)
    - Peer group(peer pressure)
    - Natural Ageing process(may adversely influence body image) (explain any 3)

20. **Mention all calculations and steps involved to draw a Knock-out fixture of 19 teams, where 4 teams are to be seeded.**

    Ans: Total no. of teams = 19(N=19)

    No. of matches = (N-1) = 19-1=18

    No. of teams in upper half = $\frac{N+1}{2}$ = 10

    No. of teams in lower half = $\frac{N-1}{2}$ = 9

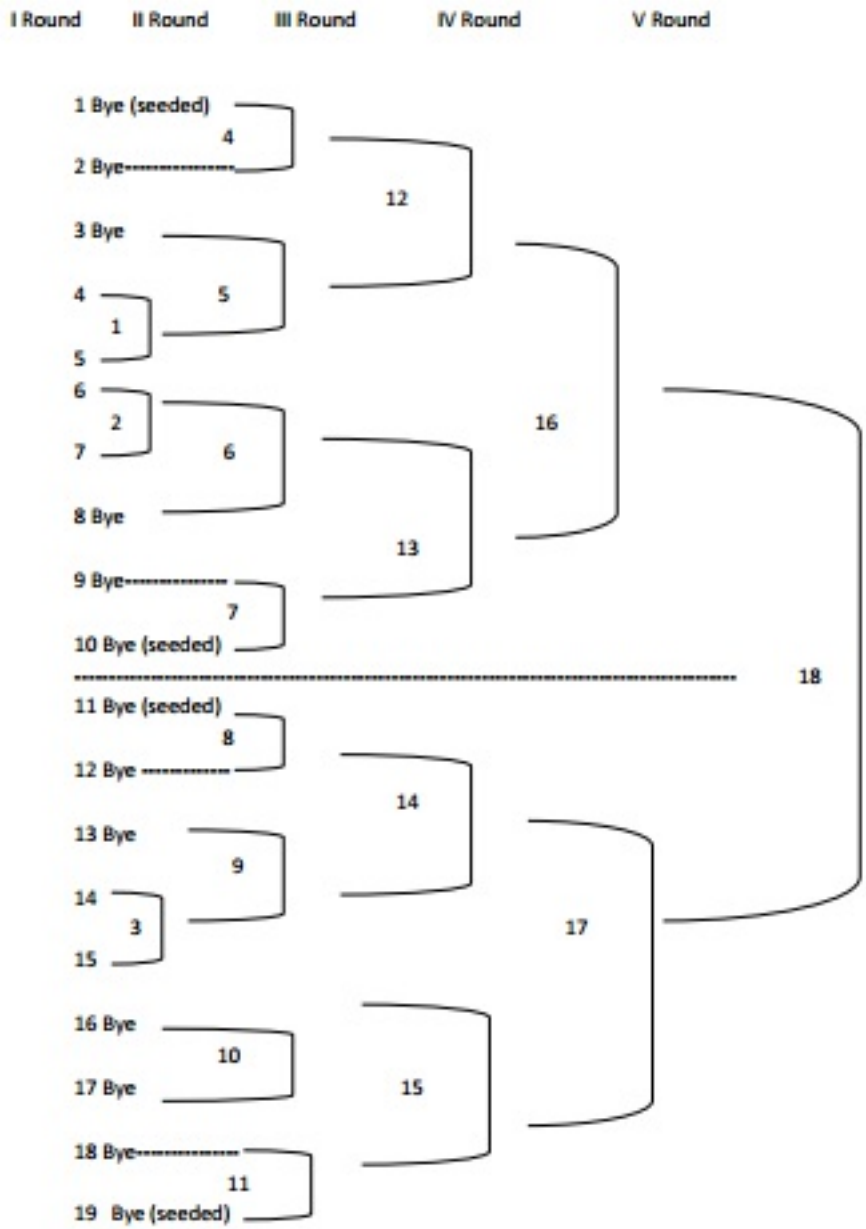
    Total no. of byes (NB) = next power of 2 - N = 32-19 = 13

    No. of byes in upper half = $\frac{NB-1}{2}$ = 6

    No. of byes in lower half = $\frac{NB+1}{2}$ = 7

    Seeding – 2 teams in upper half with byes

    2 teams in lower half with byesI



21. **Briefly explain the symptoms and causes of Asthma. Explain the procedure, benefits and contraindications of any two asanas to prevent Asthma.**

Ans: Asthma is a disease associated with respiratory tracks (air ways in the lungs)

Symptoms: excessive amount of mucus, coughing, heavy breathing, wheezing or whistling, shortness of breath, swelling of air ways, chest tightness, fatigue,

Causes of Asthma:

- Allergy
- Heredity
- Occupational Asthma (caused by inhaling fumes,gases,dust or other potentially harmful substances in work place)
- Cigarette smoking/passive smoking and polluted air

- exposure to animals that cause allergy (pets)

Asans Recommended: Sukhasan- Chakrasan – Gomukhasan – Parvatasan – Bhujangasan – Paschimottanasana– Matsyaasan (write procedure, benefit and contradictions of any 2 asanas)

22. **What are the types of motor development? Describe any six factors affecting motor development in children.**

    Ans: Types of Motor Development:

    - Gross motor development – large muscles of the body- sitting, standing, walking, running, jumping
    - Fine motor development- associated with small muscles- catching, holding, throwing, aerobic exercises etc.

    Factors affecting motor development in children

    (i) Heredity (ii) Nutrition (iii) Sleep (iv) Environment (v) Immunization (vi) Stimulation (vii) Recreation (viii) Education, Learning and Productivity (ix) Gender (x) Postural deformity (xi) Sensory impairment (xii) Obesity (xiii) opportunity (xiv) social skills (xv) training and practice (xvi) Mental health (describe any 6)

23. **Write in detail about 'Barrow's Motor Ability Test' to measure motor fitness components.**

    Ans: Three item test battery/ purpose of test/requirement/Result

    1. Standing broad jump / leg strength/mat 5X12ft. / 3 trial – best jump recorded
    2. Zig Zag Run / agility and speed/ stop watch, 5 obstacles, space 16X10ft. /3 complete circuit- time recorded.
    3. Medicine ball throw /arm and Shoulder strength/ (boys-3kg; girls- 1kg) / 3trials best recorded.

24. **Write in detail about the physiological changes taking place due to ageing.**

    Ans: Ageing is a slow and never ending process. As a result structural and functional activities begin to decline. It is inevitable.

    - Changes in muscle size and strength
    - Changes in metabolism and body composition
    - Changes in Nervous system(reaction time, movement time)
    - Changes in cardio vascular system
    - Changes in capacity of respiratory system

- Changes in bone density
- Flexibility decreases
- Changes in sensory organs
- Changes in digestive and excretory system. (explain any 5)

25. **Mention in detail about the Aerodynamic Principles and also discuss about the application of aerodynamics in sports.**

Ans: The principles of Aerodynamics are based on 4 forces of flight that helps an object move through the air.

The amount of each force compared to its opposing force determines, how an object moves through the air.

These are:

- Lift: lift is the force that pushes the object to move upward. This force acts opposite to weight.
- Weight: Weight is the force generated by the gravitational attraction of the Earth. It controls how strong the push has to be.
- Drag: Drag is a force that tries to slow down the object. It makes it hard for an object to move. It is also called air resistance force.
- Thrust: thrust is the force that is opposite to drag. It is a push that moves an object forward.

<u>Application of Aerodynamics in sports:</u>

- Throwing Discus: the shape of discus is aerodynamic which gains greater lift as air speed increases. So, it travels longer distance in the air before it touches the ground.
- Banana kick in football: creating air pressure on the side of the ball to change the direction by applying top spin helps in bringing down the ball quickly into the goal.
- Cycling: Air resistance slows down the cyclist. Air pressure difference b/w front and back tyres can cause high drag. So, a cyclist assumes a dropped position i.e. 20degree to the horizontal, to reduce the drag.
- Skiing: Skier takes a crouching position to reduce air resistance and slowing down speed. The clothes, helmet and gloves are also designed to be aerodynamic.
- Golf: the golf ball has dimples on it to reduce the drag. So the differential pressure

on the ball is less that allows the ball to stay in air for a longer period.

- Baseball /Cricket: Stitches in the ball cause turbulence in the air, thereby reducing the drag and further avoid the ball from getting slower. More spin greater lift and greater curve. (Or ant other suitable example)

26. **What do you understand by High Altitude Training in sports? What is the impact of high altitude training on athletes? Write in detail.**

Ans:

- Sports training carried out at an altitude of 8000 to 10000ft/ 2000 – 2500mts. Impact of high altitude training
- Increase erythroprotein hormone
- Increase in RBC count and size
- Increase VO2 max.
- Increase in lung capacity
- Inactive alveoli become active
- More capillarisation takes place
- Lactic acid tolerance in body increases
- Ability of athletes to push harder and apply more power during workout increases
- Athlete after training in high altitude gets competitive advantage when at sea level.
- Due to changed physiological condition Change last for 10-20 days (short term impact) (Explain any 4)