



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PERIODIC TEST - 2 PHYSICAL EDUCATION

Class: XI

Date:

Duration: 1 Hrs

Max. Marks: 25

(SECTION – A)

- Which of the following is not a component of physical fitness?
A. Speed B. Ability C. Flexibility **D. Intelligence** 1
- Which test is used to measure cardiovascular endurance?
A. Harvard Step Test
B. Sit and Reach Test
C. Push-up Test
D. 50M Dash 1
- The main purpose of test and measurement in sports is to —
A. Reward athletes
B. Evaluate performance
C. Train coaches
D. Organize tournaments 1
- Which part of the brain controls balance and coordination?
A. Cerebrum **B. Cerebellum** C. Medulla D. Pons 1
- Which muscle type is involuntary and found in internal organs?
A. Skeletal B. Cardiac **C. Smooth** D. Voluntary 1
- Which of the following is a function of the circulatory system?
A. Food Digestion
B. Blood Transportation
C. Hormone Secretion
D. Movement Control 1

(SECTION – B)

- Define measurement in Physical Education.
Answer: Measurement in Physical Education refers to the process of quantifying the physical performance or fitness of an individual. It involves collecting data related to various aspects such as strength, endurance, flexibility, and speed through specific tests and assessments. 2
- What is the importance of evaluation in sports? 2
Answer: Evaluation in sports helps in assessing the performance and progress of athletes. It allows coaches and trainers to identify strengths and weaknesses, set realistic goals, and make necessary adjustments in training programs. It also provides valuable feedback to athletes, motivating them to improve.
- What are the main functions of the skeletal system? 2
Answer: The main functions of the skeletal system are:

- **Support:** Provides structural support for the body.
- **Protection:** Protects vital organs (e.g., the brain, heart, and lungs).
- **Movement:** Facilitates movement by serving as attachment points for muscles.
- **Storage:** Stores minerals like calcium and phosphorus.
- **Blood Cell Production:** Produces red and white blood cells in bone marrow.

10. Define blood and its major components.

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Answer: Blood is a red, viscous fluid that circulates through the body, delivering nutrients and oxygen to cells and removing waste products. Its major components include:

- **Plasma:** The liquid portion that carries water, proteins, and nutrients.
- **Red Blood Cells (RBCs):** Carry oxygen from the lungs to the body and return carbon dioxide.
- **White Blood Cells (WBCs):** Defend the body against infection.
- **Platelets:** Aid in blood clotting to prevent excessive bleeding.

(SECTION – C)

11. Explain the steps involved in the process of evaluation in sports.

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Answer:

- **Setting Objectives:** The first step is to clearly define the objectives of the evaluation, such as assessing an athlete's physical fitness, skill level, or technique.
- **Selecting Appropriate Tests:** Choose the right tests or measurements based on the type of sport or physical activity (e.g., cardiovascular endurance, strength, flexibility).
- **Administering Tests:** Conduct the tests in a controlled and consistent manner to ensure reliable results.
- **Recording Results:** Document the results of the tests for comparison and further analysis.
- **Analysis and Feedback:** Analyze the collected data to assess performance. Provide constructive feedback to the athletes for improvement.
- **Adjusting Training Programs:** Based on the evaluation, make necessary adjustments to the athlete's training plan to address weaknesses and build on strengths.

12. Explain the structure and function of a muscle fibre.

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Answer:

A muscle fibre is a cylindrical, multinucleated cell that makes up muscle tissue. It contains:

- **Sarcolemma:** The outer membrane of the muscle fibre.
- **Myofibrils:** Long, thread-like structures within the fibre made up of repeating sarcomeres (the contractile units of muscle).
- **Sarcoplasm:** The cytoplasm of the muscle fibre that contains glycogen, mitochondria, and other organelles for energy production.
- **Myofilaments:** Actin (thin) and myosin (thick) filaments that slide past each other during muscle contraction.

Function: Muscle fibres contract and generate force when stimulated by electrical impulses from the nervous system. This contraction allows for movement and stability of the body.

(SECTION – D)

13. Describe the structure and functions of the human respiratory system with a neat labelled diagram. 5

Answer:

The human respiratory system consists of several key structures that work together to facilitate the intake

of oxygen and the removal of carbon dioxide. Here's an overview:

- **Nose/Nasal Cavity:** Air enters through the nose where it is filtered, warmed, and moistened.
- **Pharynx (Throat):** A passageway for air, leading to the trachea.
- **Larynx (Voice Box):** Contains the vocal cords and acts as a passage for air.
- **Trachea (Windpipe):** A tube that directs air into the bronchi.
- **Bronchi:** Branches from the trachea that carry air into each lung.
- **Bronchioles:** Smaller air passages within the lungs that direct air to the alveoli.
- **Alveoli:** Tiny air sacs where the exchange of oxygen and carbon dioxide occurs.
- **Diaphragm:** A muscle below the lungs that plays a crucial role in breathing by contracting and relaxing to allow air to enter and exit the lungs.

Functions of the Respiratory System:

- **Oxygen Supply:** Delivers oxygen to the bloodstream for distribution to tissues and organs.
- **Carbon Dioxide Removal:** Expels carbon dioxide, a waste product of metabolism.
- **Regulation of pH:** Helps maintain the pH balance of the blood by regulating CO₂ levels.
- **Protection:** Filters out foreign particles and pathogens from the air we breathe.