

Class 6 Basic Science First Term Examination 2025 - Answer Key

Total Marks: 30 (Attempt any 6 out of 8 activities, 5 marks each)

Answer Key

Activity - 1: Nutrients and Balanced Diet [5 Marks]

A) Which statements about nutrients are correct? [3]

Answer: A) 1 and 2 are correct

Explanation:

- (a) Carbohydrates are the main source of energy for the body (Correct, Textbook, Page 4).
- (b) Proteins are essential for muscle growth and repair (Correct, Textbook, Page 6).
- (c) Fibres provide energy to the body (Incorrect, fibres aid digestion, not energy, Textbook, Page 13).
- (d) Water is a nutrient required for digestion (Incorrect, water is not a nutrient but is essential for digestion, Textbook, Page 14).

B) Why should we include a variety of food items in our diet? [2]

Answer:

- (a) No single food item contains all essential nutrients in adequate amounts, so a variety ensures all nutrients are obtained (Textbook, Page 3).
- (b) A varied diet prevents deficiency diseases by providing carbohydrates, proteins, fats, vitamins, and minerals (Textbook, Page 14).

Activity - 2: Deficiency Diseases [5 Marks]

A) Which deficiency disease is caused by a lack of Vitamin A? [2]

Answer: B) Night blindness

Explanation: Lack of Vitamin A causes night blindness, affecting vision in dim light (Textbook, Page 12).

B) List two food items rich in calcium to prevent osteoporosis. [3]

Answer:

- (a) Milk

- (b) Leafy vegetables

Explanation: These foods are rich in calcium, which helps in bone formation and prevents osteoporosis (Textbook, Page 11).

Activity - 3: Testing for Nutrients [5 Marks]

- A) **Describe the iodine test to detect starch in food items. [3]**

Answer: Take two test tubes, one with a food item (e.g., rice water) and another with a different food item (e.g., milk). Add 2-3 drops of diluted iodine solution to each. If starch is present, the solution turns blue-black; if absent, no color change occurs (Textbook, Page 4).

- B) **What observation indicates the presence of fat when rubbed on paper? [2]**

Answer: A translucent or greasy spot that persists on the paper indicates the presence of fat (Textbook, Page 7).

Activity - 4: Magnets and Their Properties [5 Marks]

- A) **Which statements about magnets are correct? [3]**

Answer: B) 1 and 3 are correct

Explanation:

- (a) A magnet has two poles: North and South (Correct, Textbook, Page 22).
- (b) Like poles of magnets attract each other (Incorrect, like poles repel, Textbook, Page 28).
- (c) Magnetic force is strongest at the poles (Correct, Textbook, Page 22).
- (d) Wood is a magnetic substance (Incorrect, wood is non-magnetic, Textbook, Page 22).

- B) **What happens when a magnet is broken into two pieces? [2]**

Answer: Each piece becomes a smaller magnet with its own North and South poles (Textbook, Page 25).

Activity - 5: Magnetic Applications [5 Marks]

- A) **How can you make an electromagnet using a nail and copper wire? [3]**

Answer: Wind insulated copper wire around a soft iron nail in many coils. Remove insulation from both ends of the wire and connect them to a battery. When electricity flows, the nail becomes a magnet. Disconnecting the battery removes the magnetic property (Textbook, Page 32).

- B) **Suggest a method to separate iron filings from sand using a magnet. [2]**

Answer: Move a magnet over the mixture of iron filings and sand. The iron filings, being magnetic, will stick to the magnet, separating them from the non-magnetic sand (Textbook, Page 24).

Activity - 6: Skeletal System Functions [5 Marks]

- A) Which is not a function of the skeleton? [2]

Answer: C) Produces energy

Explanation: The skeleton provides shape, support, protection, and enables movement, but it does not produce energy (Textbook, Page 39).

- B) Explain how the skull protects the brain. [3]

Answer: The skull, made of 22 bones, forms a hard, protective covering around the brain, shielding it from minor injuries that could cause severe health issues. It also protects sensory organs like the eyes and ears (Textbook, Page 40).

Activity - 7: Joints and Movement [5 Marks]

- A) Complete the table with the correct joint type and its location. [3]

Answer:

Joint Type	Location in Body
Hinge Joint	Elbow, Knee
Ball and Socket Joint	Shoulder, Hip
Pivot Joint	Neck

Explanation: Hinge joints allow movement in one direction (Textbook, Page 44), ball and socket joints allow rotation (Textbook, Page 45), and pivot joints allow rotation of one bone on another (Textbook, Page 52).

- B) Why are joints important for movement? [2]

Answer: Joints areuencia de movimientos (Textbook, Page 43).

Activity - 8: Practical Applications [5 Marks]

- A) Complete the table with the vaccine and the disease it prevents. [3]

Answer:

Name of Vaccine	Disease
B.C.G	Tuberculosis
Polio Vaccine	Polio
M.R Vaccine	Measles, Rubella

Explanation: These vaccines prevent the specified diseases (Textbook, Page 3 of the 2024 Onam Exam question paper).

- B) Why should a fractured bone be immobilized before hospital treatment? [2]

Answer: Immobilizing a fractured bone prevents further movement, which could worsen the injury or cause additional damage to surrounding tissues, ensuring stability until medical treatment is received (Textbook, Page 47).