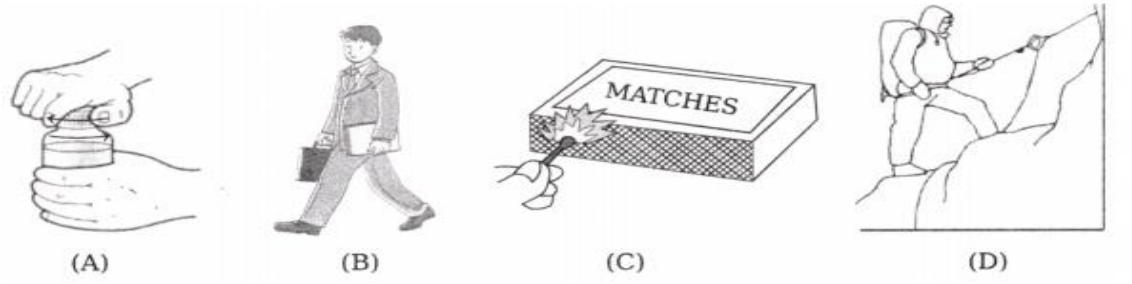
INTERNATIONAL INDIAN SCHOOL BURAIDAH
WORKSHEET FOR THE ACADEMIC YEAR 2026-27
Class- 8th Subject: Science
CHAPTER # 5 EXPLORING FORCES

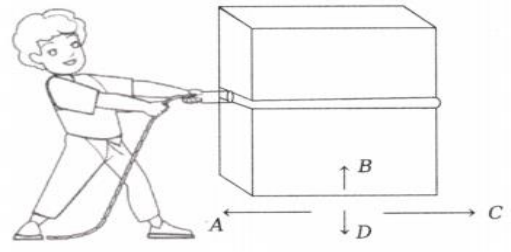
A: CHOOSE THE CORRECT OPTION:

1. Study the diagrams given below. How many of these actions involve the use of friction?



(a) Only A and C (c) Only C (b) Only B and D (d) All of them

2. A boy is pulling a heavy box across the floor as shown below. Which, arrows A, B, C and D correctly show the direction of the forces of friction and gravity?



OPTION	FRICTION	GRAVITATION
A	A	B
B	A	C
C	C	A
D	C	D

3. A football player kicks a stationary ball, and it begins to move. Which of the following effects of force is best demonstrated in this scenario?

(a) Change in shape of an object (b) Change in speed of an object
(c) Making an object move from rest (d) Both (b) and (c)

4. A spring balance is used to measure the force with which the Earth pulls an object towards itself. What is this force called?

(a) Mass (b) Density (c) Weight (d) Gravity

5. In science, a force is defined as:

a) Only a push b) Only a pull c) A push or a pull d) Energy of motion

6. When we place a magnet over a mixture of sand and iron, it attracts iron particles but not sand particles?

a) Iron is lighter than sand
b) Iron is a magnetic material, sand is not a magnetic material
c) Sand is insoluble in water
d) Iron is not a magnetic material, sand is a magnetic material

7. Forces always involve:

a) Only one object b) Interaction between two objects
c) Only moving objects d) Only heavy objects

8.The SI unit of force is:

a) Joule (J) b) Watt (W) c) Newton (N) d) Pascal (Pa)

9. Which is a non-contact force?

a) Muscular force b) Friction c) Magnetic force d) Push with a stick

10. Weight is measured in:

a) Kilogram (kg) b) Newton (N) c) Meter (m) d) Joule (J)

11.During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is

(a) force of gravity (b) electrostatic force (c) force of friction (d) magnetic force

12. A ball rolling on the ground slows down and finally stops because of –

(a) force (b) less force applied (c) friction (d) none of the above

B.FILL IN THE BLANKS:

1. A force arises due to _____ between two objects.

2. The force exerted by the muscles of a human or animal is called _____ force.

3._____ force always opposes the motion of an object.

4._____ force can act even when the two bodies are not in physical contact.

5. The force exerted by a charged body on another charged or uncharged body is called _____ force.

6. The force exerted by the Earth on all objects is known as _____ force.

7. When we stop rowing a boat, it gradually comes to rest because of _____ between the boat and water.

8. A horse pulls a cart forward by applying a _____ force, while the cart pulls the horse backward due to _____.

9. The attraction between the Earth and the Moon is due to _____ force, which is a type of non-contact force.

10. The upward force exerted by a liquid on an immersed object is called _____.

C. ANSWER THE FOLLOWING:

1. Differentiate between a contact force and a non-contact force with one example each.
2. Describe three different effects that a force can have on an object. Provide a specific example for each effect from daily life.
3. Explain the concept of gravitational force. Is it an attractive or repulsive force? What is the special name for the gravitational force exerted by the Earth?
4. Distinguish between the magnetic force and the electrostatic force.

D.TRUE OR FALSE

Choose the correct sequence of True (T) and False (F) for the statements given below:

(a) Friction acts in the direction of motion.
(b) Upthrust is another name for buoyant force.
(c) Magnetic force can be attractive or repulsive.
(d) Forces acting in opposite directions always cancel out.
(e) Gravitational force decreases with increase in height.

(1) F T T F T (2) F T F T F (3) T T T F T (4) F F T F T

E. CASE STUDY:

Read the passage carefully and then answer the given questions.

During a school fair, a group of students sets up a game stall. They have two trolleys, one made of wood and the other of plastic, both of the same size. The game involves players pushing a trolley over a rough surface to see how far it goes. A student, Rahul, observes that despite applying the same amount of force, the wooden trolley moves a shorter distance than the plastic one. Puzzled, he asks his teacher for an explanation. The teacher explains that the interaction between the two surfaces is causing a force that opposes the motion. This force is different for each trolley, which is why they travel different distances.

(i) What is the name of the force that opposes the motion of the trolleys?
(ii) Is this a contact force or a non-contact force?
(iii) Which trolley experiences a greater force opposing its motion?
(iv) On which kind of surface the friction will be more? (Rough surface / Smooth surface)

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