Worksheet: Exploring Forces

NIOS · Class 8 · Science · 8 questions · 13 marks

Name: _____ Date: _____ Score: _____ / 13

Q1. Which of the following is a contact force? *[1 mark]*

A) Gravitational force

B) Magnetic force

C) Friction

D) Electrostatic force

Q2. The SI unit of weight is *[1 mark]*

A) gram (g)

B) kilogram (kg)

C) newton per kilogram (N/kg)

D) newton (N)

Q3. A coil of wire, a rubbed balloon, a bar magnet and the Earth can each exert a force at a distance. Which of these forces can ONLY attract, never repel? *[1 mark]*

A) All three can attract and repel

B) Magnetic force

C) Electrostatic force

D) Gravitational force

Q4. A spring balance has a range of 0 to 6 N, with bigger marks every 1 N and 4 small divisions between consecutive bigger marks. What is the smallest weight it can measure? *[2 marks]*

Q5. Assertion (A): A ball thrown vertically upwards has a force acting on it even at the topmost point of its path. Reason (R): At the topmost point the ball is momentarily at rest. *[1 mark]*

A) A is true but R is false

B) A is false but R is true

C) A is true but R is not the correct explanation of A

D) Both A and R are true, and R is the correct explanation of A

Q6. A ball rolling on flat ground slows down and stops, although nothing visible is touching it apart from the ground. Explain how the chapter concludes that a force must be acting, without ever seeing that force. *[3 marks]*

Q7. Two identical wooden blocks are floating, one in water and one in a much denser liquid. Which statement is best supported by the chapter? *[1 mark]*

A) Each block floats with the buoyant force on it equal to its own weight

B) The block in water experiences no buoyant force

C) The block in the denser liquid weighs less

D) Both blocks sink to the same depth

Q8. Why does a spring balance carry a scale in grams alongside its scale in newton, and in what situation would the gram scale be wrong while the newton scale stayed right? *[3 marks]*