

ICSE Board
Class VI Physics
Sample Paper – 2

Time: 2Hours

Total Marks: 75

General Instructions:

1. *All questions are compulsory.*
 2. *Questions 1 to 15 carry one mark each.*
 3. *Questions in 2 A and B carry one mark each.*
 4. *Questions in 3 A carry one mark each and 3 B carries 5 marks.*
 5. *Question 4 carries 5 marks each.*
 6. *Questions in 5 A and B carry one mark each.*
 7. *Questions in 6 A and B carry five mark each.*
 8. *Question 7 A and 7 B carry five marks.*
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Question 1

Choose the correct answer out of the four available choices given under each question. [15]

1. Mechanical advantage (M.A), load (L) and effort (E) are related as
 - (a) $M.A = L \times E$
 - (b) $M.A \times E = L$
 - (c) $M.A \times L = E$
 - (d) None of the above
2. Which of the following is not a lever of class II?
 - (a) Nail cutter
 - (b) Scissors
 - (c) A bottle opener
 - (d) Wheel barrow
3. If the area of contact increases, then
 - (a) Pressure decreases
 - (b) Pressure increases
 - (c) Pressure remains constant
 - (d) None of the above

4. A force which always tends to slow down the motion of an object on a surface is
 - (a) Weight
 - (b) Inertia
 - (c) Gravity
 - (d) Friction

5. Why is it harder to slide a stationary heavy box across the floor than to keep it sliding?
 - (a) Sliding friction is greater than the static friction.
 - (b) Sliding friction is less than rolling friction.
 - (c) Static friction is greater than sliding friction.
 - (d) Sliding friction is more than rolling friction.

6. Which of the following is not a fundamental unit?
 - (a) Cubic metre
 - (b) Kilogram
 - (c) Metre
 - (d) Kelvin

7. Rubbing your palms together creates warmth due to:
 - (a) Air in between the two palms
 - (b) Gravity
 - (c) Friction between the two palms
 - (d) All of the above

8. Two like magnetic poles:
 - (a) Attract each other
 - (b) Repel each other
 - (c) Repel when close and attract when far from each other
 - (d) Attract when close and repel when far from each other

9. The length having the largest magnitude out of the following options is
 - (a) 5 cm
 - (b) 7 mm
 - (c) 4 km
 - (d) 6 m

10. The magnetism acquired by a magnetic material when it is kept near (or in contact with) a magnet, is called
 - (a) Temporary magnetism
 - (b) Induced magnetism
 - (c) Permanent magnetism
 - (d) Induction

- 11.** Water stored at a height in a dam possesses
- (a) Chemical energy
 - (b) Kinetic energy
 - (c) Potential energy
 - (d) Electrical energy
- 12.** Which of the following is not a non-contact force?
- (a) Frictional force
 - (b) Gravitational force
 - (c) Electrostatic force
 - (d) Magnetic force
- 13.** A block of weight 400 N is kept on the floor. The area of contact is 4 m^2 . The pressure exerted by the box on the floor is
- (a) 200 Pa
 - (b) 400 Pa
 - (c) 300 Pa
 - (d) 100 Pa
- 14.** Every object in this universe, whether small or large exerts a force on every other object. What is the name of this force?
- (a) Electrostatic force
 - (b) Gravitational force
 - (c) Magnetic force
 - (d) Nuclear force
- 15.** Calculate the distance between a man and a box when the work done to move the box was 100 J with a force of 15 N.
- (a) 16.6 m
 - (b) 26.6 m
 - (c) 6 m
 - (d) 6.6 m

Question 2

(A) Name the following. [5]

1. Fundamental unit of temperature.
2. Simplest machine.
3. A quantity which depends on other quantities.
4. Time taken by the Earth to complete one rotation about its own axis.
5. Force of friction between a rolling object and surface.

(B) Fill in the blanks. [5]

1. Electricity produced from water is called _____.
2. The normal temperature of the body is _____.
3. To increase pressure, area of contact is _____.
4. _____ is the surest test of magnetism.
5. Force of gravity is always directed towards the _____ of the Earth.

Question 3

(A) Match the following. [5]

Column A	Column B
1. Volume	a. Electrical to heat
2. Heater	b. Class I lever
3. Claw hammer	c. m/s
4. Speed	d. Light to electrical
5. Photo voltaic cell	e. m ³

(B) Correct the following sentences. [5]

1. An object can be measured with an accuracy of 0.01 mm with a vernier calliper.
2. A class II lever has fulcrum in the middle.
3. Weight of an object is the force with which an object gets attracted towards the ground.
4. Static friction is lesser than sliding friction and greater than rolling friction.
5. In a solar cell, light energy is converted to heat energy.

Question 4

(A) [5]

1. What are derived units?
2. How many base units are there in S.I. system?
3. Name the larger units of length?
4. Name the shorter units of length?
5. What is parallax?

(B) A girl of mass 50 kg is standing on pencil heels each of area of cross-section 1 cm^2 and an elephant of mass 5000 kg and foot area 250 cm^2 each, are standing on a floor. Which one will exert more pressure and what is the difference between the pressure exerted by the girl and the elephant? [5]

Question 5

(A) Answer in one sentence: [5]

1. Why do all machines require proper care and maintenance?
2. Define 1 Joule of work.
3. When do we say that work is done?
4. What is volume? What is its unit?
5. Name the force in action when a potter turns his wheel.

(B) Find the odd one out. [5]

1. Iron, nickel, cobalt, aluminium
2. Length, mass, area, time
3. kelvin, volta, celsius, Fahrenheit
4. Magnetic force, gravitational force, electrostatic force, frictional force
5. Making pores, using lubricants, polishing, using ball bearings

Question 6

(A) What is magnetic induction? Explain with the help of a diagram. [5]

(B) Define the following. [5]

1. One kilogram
2. Muscular force
3. Pressure
4. Length of a magnet
5. Efficiency

Question 7**(A)** Answer the following.

1. Define Kinetic energy and Potential energy? [2]
2. What are the effects of force? [3]

(B) Answer the following.

1. What is friction? Write any two advantages of friction? [2]
2. What is a screw? Give three uses of screws. [3]