

ICSE Board
Class VI Physics
Sample Paper – 1

Time: 2 hrs

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. What is the work done in lifting a 5 kg body through a height of 10 m? ($g = 10 \text{ m/s}^2$)
(a) 5 J
(b) 15 J
(c) 50 J
(d) 500 J
2. If the velocity of a moving car is reduced to half its original velocity, its kinetic energy would
(a) Become four times
(b) Become two times
(c) Become one fourth
(d) Become half
3. The S.I. unit of length is
(a) Metre
(b) Yard
(c) Cubit
(d) Foot

4. When a bar magnet is suspended freely, it comes to rest in the
 - (a) East-West direction
 - (b) North-East direction
 - (c) North-South direction
 - (d) South-West direction

5. Which type/types of levers always have mechanical advantage greater than 1?
 - (a) Class I
 - (b) Class II
 - (c) Class III
 - (d) All of the above

6. The unit of 1 atm is taken as the unit of
 - (a) Force
 - (b) Area
 - (c) Work
 - (d) Pressure

7. Which of the following is force at a distance?
 - (a) Muscular force
 - (b) Magnetic force
 - (c) Friction force
 - (d) Normal reaction force

8. Tyres are provided with deep grooves on their surface to
 - (a) Increase the friction
 - (b) Reduce the cost of material used
 - (c) Decrease the friction
 - (d) Make them look attractive

9. For a wheelbarrow _____ is at the centre.
 - (a) Fulcrum
 - (b) Effort
 - (c) Load
 - (d) None of the above

10. A cubit is length equal to
 - (a) The distance between nose and toe
 - (b) The distance between finger-tips and elbow
 - (c) 3 metres
 - (d) The distance between outstretched arm and chin.

- 11.** Potential energy of a person is minimum when
- (a) A person is standing
 - (b) A person is sitting on a chair
 - (c) A person is sitting on the ground
 - (d) A person is lying on the ground
- 12.** Tools meant for cutting and piercing always have
- (a) Sharp edges
 - (b) Smooth edges
 - (c) Long handle
 - (d) All of the above
- 13.** A force which can change the motion of an object without actually touching it is
- (a) Contact force
 - (b) Non contact force
 - (c) Distant force
 - (d) None of the above
- 14.** Permanent magnets are made up of
- (a) Copper
 - (b) Soft iron
 - (c) Steel
 - (d) Aluminium
- 15.** A force can do which of the following?
- (a) It can alter the speed of the moving object
 - (b) It can change the direction of the motion of the body
 - (c) It can change the shape of an object
 - (d) All of the above

Question 2

(A) Name the following. [5]

1. A quantity which does not depend on other quantities.
2. Force exerted by a charged body.
3. Unit of pressure.
4. Energy produced by vibrating objects.
5. Space occupied by an object.

(B) Fill in the blanks. [5]

1. _____ is the degree of hotness or coldness of a body.
2. _____ is the ultimate source of energy.
3. Unlike poles of two magnets _____ each other.
4. Nuclear energy is released in the form of _____ energy when an atom disintegrates.
5. _____ is applied to moving parts of a machine to reduce friction.

Question 3

(A) Match the following. [5]

Column A	Column B
1. Length	a. Electric to magnetic
2. Oar	b. Metre
3. Electromagnet	c. kelvin
4. Temperature	d. Class III lever
5. Forceps	e. Class II lever

(B) Correct the following sentences. [5]

1. Friction resists motion because surfaces are attracted to each other.
2. A class III lever has fulcrum in the middle.
3. The SI unit of area is metre cubed.
4. Mercury is used in a thermometer because it wets the glass.
5. The strength of an electromagnet can be increased by increasing the number of turns or decreasing the current flowing through the coil.

Question 4

(A) Give examples to show that friction is both a friend and a foe. [5]

(B) What are the five important uses of a magnet? [5]

Question 5

(A) Answer in one sentence: [5]

1. State the factors on which work done depends.
2. What is friction?
3. The base of taller buildings is made broader. Why?
4. Name the two factors by which a machine's ability to do work is measured.
5. What are natural and artificial magnets?

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

1. Plastic, brass, iron, copper
2. Sharp knife, pointed heel, wide tyres, pointed nail
3. Sound energy, chemical energy, heat energy, light energy
4. Wood, sun, water, wind
5. Nut cracker, sugar tongs, wheel barrow, bottle opener

Question 6

(A) Show with the help of diagrams, the differences between I, II and III classes of levers. [5]

(B) Define the following. [5]

1. One metre
2. Lower fixed point of thermometer
3. Contact force
4. Potential energy
5. Magnetic axis

Question 7

(A) Answer the following.

1. What is an inclined plane? Give four examples of inclined planes commonly used in daily life? [2]
2. How is hydroelectricity produced? [3]

(B) Answer the following.

1. What is the use of [2]
 - i. Clinical thermometer
 - ii. Laboratory thermometer
2. State the important properties of a magnet. [3]