

ICSE Board
Class VIII Physics
Sample Paper – 4

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 2A and 2B carry one mark each.*
 4. *Questions in 3A and 3B carry one mark each.*
 5. *Question 4A and 4B carry five marks each.*
 6. *Question 5A and 5B carry five marks each.*
 7. *Question 6A and 6B carry five marks each.*
 8. *Question 7A and 7B carry five marks each.*
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Question 1

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

1. The fluid between the retina and the lens is called
 - (a) Aqueous humour
 - (b) Vitreous humour
 - (c) Choroid
 - (d) Sclerotic
2. Which among the following is false?
 - (a) A denser liquid exerts a greater upthrust
 - (b) Relative density has no unit
 - (c) Icebergs have 11/12 parts above water
 - (d) A body experiences a loss in weight in a liquid
3. The attractive property of a magnet is maximum at
 - (a) The North Pole only
 - (b) The South Pole only
 - (c) Both the poles
 - (d) The centre of the magnet
4. Which of the following was the first satellite launched by India?
 - (a) EDUSAT
 - (b) INSAT
 - (c) Bhaskara
 - (d) Aryabhata

5. When an object is placed beyond $2F$ in front of a convex lens, the image is formed
- (a) Between O and F
 - (b) At $2F$
 - (c) Between F and $2F$
 - (d) Beyond $2F$
6. According to the principle of calorimetry
- (a) Heat lost by a hot body is less than the heat gained by a cold body
 - (b) Heat lost by a hot body is more than the heat gained by a cold body
 - (c) Heat lost by a hot body is equal to the heat gained by a cold body
 - (d) None of the above
7. In a simple barometer, a vacuum is created in the tube above the mercury level. This vacuum is known as a
- (a) Barometric vacuum
 - (b) Torricellian vacuum
 - (c) Aneroid vacuum
 - (d) Pascalian vacuum
8. What happens to the kinetic energy of a body when $3/4^{\text{th}}$ of its mass is removed and its velocity is doubled?
- (a) Becomes 4 times
 - (b) Becomes $1/4$ times
 - (c) Becomes $1/2$ times
 - (d) Remains the same
9. The quantity which remains the same across all the resistances when they are connected in a series is the
- (a) Current
 - (b) Voltage
 - (c) Power
 - (d) Heat energy
10. Who discovered that a magnetic field is developed around a current carrying conductor?
- (a) Michael Faraday
 - (b) Hans Oersted
 - (c) John Fleming
 - (d) James Maxwell

- 11.** A prism is said to be in minimum deviation when
- Angle of incidence = Angle of emergence
 - Angle of incidence > Angle of emergence
 - Angle of incidence < Angle of emergence
 - Angle of incidence = 0°
- 12.** Which among these is not true for a solid?
- Molecules are very tightly packed.
 - Molecules attract one another with a strong force.
 - It is easy to break solids as they have a strong intermolecular force.
 - They have a definite shape and volume.
- 13.** Which of these functions is not performed by a gold leaf electroscope?
- To detect a charge
 - To differentiate between a conductor and an insulator
 - To charge an uncharged body
 - To identify the nature of a charge
- 14.** The temperature of the surface of the Sun is about
- 1 million $^\circ\text{C}$
 - 6000 $^\circ\text{C}$
 - 20 million $^\circ\text{C}$
 - 4000 $^\circ\text{C}$
- 15.** The main constituent of biogas is
- Methane
 - Ethylene
 - Hydrogen and oxygen
 - Oxygen and Ethane

Question 2

(A) Match the columns and rewrite them correctly.

[5]

	Column A		Column B
1	Brightest planet	1	Convex lens
2	Myopia	2	A battery
3	Chemical energy to sound energy	3	Venus
4	Potential difference	4	Water
5	Concave meniscus	5	Mercury
		6	A fire cracker
		7	Concave lens
		8	volt

(B) Fill up the blanks and rewrite the sentences: [5]

1. Rainbow is produced due to _____ of white light.
2. We use water in hot bags for _____ because it will keep us warm.
3. A glass slab appears to be _____ in water than in air.
4. The _____ Pole of the Earth's magnet is closer to the geographic South Pole.
5. If the Moon is in the _____ core of the Earth's shadow, it is known as a total lunar eclipse.

Question 3

(A) State whether the following statements are True or False. Correct the false statement and rewrite it. [5]

1. A concave lens always forms an inverted image.
2. A camel can run faster in deserts than a horse.
3. Non-renewable sources of energy can never get exhausted.
4. While charging by induction, there is no loss of charge.
5. An electromagnet is a temporary magnet.

(B) Give reasons for the following. [5]

1. It takes some time to see objects in a cinema hall when we just enter it from bright sunlight.
2. Heavy trucks have 6-8 tyres.
3. In a hydroelectric power plant more electrical power can be generated if the water falls from a greater height.
4. Soaps and detergents help in cleaning clothes.
5. Land breeze is set up during the night.

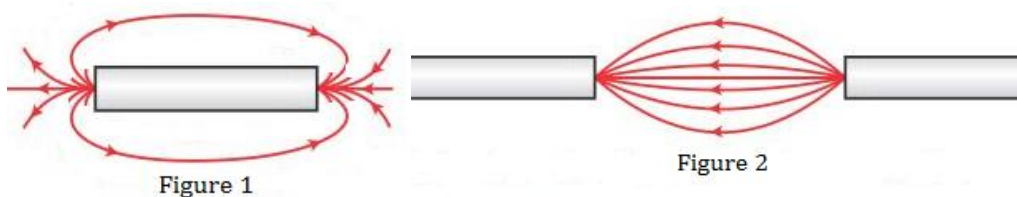
Question 4

(A)

1. For which position of an object does a convex lens form a real and inverted image of the same size as that of object? Draw a labelled ray diagram to show the formation of the required image. [3]
2. What is a galaxy? Name the different kinds of galaxies. [2]

(B)

1. Identify the poles of the magnet in the figures (1) and (2) below: [2]



2. Answer the following: [3]

(a) What is electromagnetic induction?

(b) In what way can the magnitude of the induced current be increased?

Question 5

(A)

1. Water wets the glass surface while mercury does not. Explain. [2]

2. Give three differences between myopia and hypermetropia. [3]

(B)

1. What are the do's and don'ts during a thunderstorm when you are outside the house? [3]

2. For what purposes is solar energy used? [2]

Question 6

(A)

1. Describe the advantages of high specific heat capacity of water as a coolant. [2]

2. Answer the following: [3]

(a) What happens to the equivalent resistance and the current in a parallel circuit when more and more resistances are added?

(b) Name the physical quantity whose unit is volt/ampere.

(c) What is meant by potential difference between two points?

(B)

1. Write a note on tides. [2]

2. Ram throws a stone in the pond. It displaces 1.5 kg of water. Calculate the buoyant force acting on the stone ($g = 9.8 \text{ m/s}^2$). [3]

Question 7

(A)

1. 'A ray of light incident on a rectangular glass slab immersed in any medium emerges parallel to itself'. Draw a labelled ray diagram to justify the statement. [2]

2. State the rules for construction of ray diagrams for a convex lens along with the ray diagram. [3]

(B)

1. How much current will an electric bulb draw from a 220 V source, if the resistance of the filament of the bulb is 1200Ω ? [2]

2. What is Pascal's law? Demonstrate it with the help of an experiment. [3]