

ICSE Board
Class VIII Physics
Sample Paper – 3

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 current which changes its direction after fixed intervals of time is called
 - (a) Direct current
 - (b) Changing current
 - (c) Alternating current
 - (d) Varying current
2. Where should we place an object in front of a convex lens to get a real image which is the same size as the object?
 - (a) At the principal focus of the lens
 - (b) At twice the focal length
 - (c) At infinity
 - (d) Between the optical centre of the lens and its principal focus
3. What is the Indian name of the constellation 'Ursa Major'?
 - (a) Vyadha
 - (b) Vrischika
 - (c) Simha
 - (d) Saptarishi
4. Potential energy is the energy possessed by an object due to its
 - (a) Position
 - (b) Motion
 - (c) Speed
 - (d) Mass

5. If the refractive index of two media are equal, then
 - (a) Light will reflect in the same medium
 - (b) Interface will absorb the light
 - (c) No refraction will occur
 - (d) It will bend away from the normal

6. The elevation in the central part of the retina of a human eye is called
 - (a) Blind spot
 - (b) Yellow spot
 - (c) Fovea centralle
 - (d) Green spot

7. The commercial unit of electric energy is
 - (a) kilowatt-hour
 - (b) watt
 - (c) joule
 - (d) joule-hour

8. The instrument used for measuring the density or relative density of liquids is known as
 - (a) Spherometer
 - (b) Hydrometer
 - (c) Buoyancy meter
 - (d) Barometer

9. The loud sound heard during lightning is called
 - (a) Lightning streak
 - (b) Cloud burst
 - (c) Thunder
 - (d) Sonic burst

10. As we go higher into the atmosphere the density of air
 - (a) Gradually increases
 - (b) Gradually decreases
 - (c) Remains the same throughout
 - (d) Initially decreases and then increases

11. The temperature at which water vapourises into steam is called
 - (a) Boiling point
 - (b) Melting point
 - (c) Freezing point
 - (d) Condensation temperature

12. Surface tension has the dimensions of

- (a) Force
- (b) Force per unit area
- (c) Force per unit length
- (d) Force \times length

13. In a uniform magnetic field, the field lines are

- (a) Curved
- (b) Parallel equidistant straight lines
- (c) Parallel but non-equidistant straight lines
- (d) None of the above

14. How many constellations are officially recognised by the International Astronomical Union?

- (a) 76
- (b) 88
- (c) 108
- (d) 95

15. The work done in moving a charge of 5 C across the potential difference of 10 V is

- (a) 50 J
- (b) 2 J
- (c) 0.5 J
- (d) 25 J

Question 2

(A) Match the columns and rewrite them correctly.

[5]

	Column A		Column B
1	Constellation	1	Refraction
2	Prism	2	Solidification
3	Microscope	3	Vrischika
4	Camphor	4	Shukra
5	Earth	5	Sublimation
		6	Dispersion
		7	Magnet

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

1. A _____ image cannot be seen on a screen.
2. Coal, petroleum and natural gas are _____ fuels.
3. The _____ controls and regulates the amount of light entering the eye.
4. The effect of a force acting vertically downwards on a unit area is called _____.
5. In a series combination, the _____ is same across all the resistances.

Question 3

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

1. A rubber cork experiences the same upward thrust when immersed in oil and turpentine.
2. Myopia is also called far-sightedness.
3. Hydropower plants convert kinetic energy to electricity.
4. The layer above the chromosphere is called the photosphere.
5. Tents do not remain water-proof when we touch them.

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

1. Stars appear to us like point objects.
2. A compass needle placed near a current carrying conductor shows deflection.
3. The snow on mountains does not melt as a whole.
4. Objects feel lighter when in water than outside it.
5. A pool of water appears to be less deep than it actually is.

Question 4

(A)

1. Explain transfer of heat by conduction. [3]
2. How do ciliary muscles affect the functioning of the eye? [2]

(B)

1. What energy transformations are taking place in the following examples? [2]
 - (a) Electric motor
 - (b) Burning of wood
2. Answer the following: [3]
 - (a) Define: Valence electrons.
 - (b) When can you say that an atom becomes negatively charged?
 - (c) When can you say that an atom becomes positively charged?

Question 5

(A)

1. Define the following: [2]
 - (a) Optical Centre
 - (b) Principal Axis
2. Describe the Milky Way galaxy. [3]

(B)

1. Answer the following: [3]
 - (a) What are magnetic field lines?
 - (b) Draw field lines when two bar magnets are placed with their like poles facing each other.
 - (c) List any two properties of magnetic field lines.
2. Two coils 1 and 2 of insulated copper wire having large but different number of turns are wound over a cardboard cylinder. Coil 1 is connected to battery and a plug key. Coil 2 is connected to a galvanometer. How will the galvanometer reading change when
 - (a) key is plugged in?
 - (b) key is taken out?
 Give reasons for your answers.

Question 6

(A)

1. Why do different colours of light deviate differently in a prism? [2]
2. Draw a ray diagram to show the formation of an image, when the object is placed between the optical centre and the principal focus of a convex lens. [3]

(B)

1. A rectangular block of dimensions 25 cm, 25 cm, 15 cm weighs 25 N. What will be the pressure exerted by its largest face on the surface? [2]
2. Find the equivalent resistance when three resistances of $3\ \Omega$, $6\ \Omega$ and $9\ \Omega$ are connected in: [3]
 - (a) Series
 - (b) Parallel

Question 7**(A)**

1. Answer the following: [3]
 - (a) What is heat?
 - (b) Describe sea breeze.
2. Find out the quantity of heat produced in a resistance of $10\ \Omega$ when a current of $2\ \text{A}$ is supplied to it for 8 minutes. [2]

(B)

1. What is the distance of a star in light years, if it is at a distance of 20 parsec? [2]
2. What is meant by the relative density of a substance? What is its significance? The relative density of mercury is 13.6. What is its density in S.I. units? (Density of water = $1000\ \text{kg/m}^3$) [3]