SAMSKAARA ACADEMY

Continuous Comprehensive Evaluation II – SEPTEMBER 2024

GRADE: VII **DURATION: 2 hrs**

DATE: 17.09.2024 **SUBJECT: PHYSICS** **MAX MARKS: 80**

Answers to this Paper must be written on the paper provided separately.

*You will **not** be allowed to write during the first **15** minutes. You will use this time to read the question paper. The time given at the head of this Paper is the time allowed for writing the answers.*

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*Attempt **all questions** in Section A. Attempt **as instructed** in Section B.*
The intended marks for questions are given in brackets [ ].

SECTION A
(Answer all questions)

Q1. CHOOSE THE CORRECT ANSWERS TO THE QUESTIONS FROM THE GIVEN OPTIONS: [10]

1. The volume of a cuboid of length 2 cm, breadth 5 cm, and height 6 cm is
   (i) 60 cm^3 (ii) 16 cm^3 (iii) 20 cm^3 (iv) 24 cm^3
2. The SI unit of density is
   (i) g cm^{-3} (ii) newton (iii) kg m^{-3} (iv) kg cm^{-3}
3. What kind of motion is described by a drilling machine?
   (i) Translatory (ii) Vibratory (iii) Mixed (iv) Rotatory
4. 1 ms^{-1} equals
   (i) 5 kmh^{-1} (ii) 18 kmh^{-1} (iii) (18/5) kmh^{-1} (iv) (5/18) kmh^{-1}
5. An example of conversion of sound energy to electrical energy is
   (i) Electric bell (ii) Microphone (iii) Power plant (iv) Electromagnet
6. Tidal energy is the energy harnessed from
   (i) Biomass (ii) Sea waves (iii) Flowing river water (iv) fossil fuels
7. When an object absorbs all the wavelengths and reflects none, it looks
   (i) white (ii) colour of the object (iii) black (iv) image of the object
8. Which of the following properties of light results in heat?
   (i) Reflection (ii) rectilinear propagation (iii) refraction (iv) absorption
9. The earth attracts a body of mass 1 kg with a force of 10N. The weight of a boy whose mass is 50 kg is
   (i) 50 kg (ii) 500 N (iii) 50 N (iv) 5 N
10. A ball rolling on the ground possesses
    (i) Kinetic energy (ii) Potential energy (iii) Heat energy (iv) no energy

Q2. FILL IN THE BLANKS WITH APPROPRIATE TERMS: [5]

1. A moving ceiling fan shows _____ motion.
2. Equal masses of different substances will have _____ volume.
3. Force depends on magnitude and direction and hence it is a _____ quantity.
4. The SI unit of power is _____.
5. The speed of light in air is _____.

Q3. STATE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE: [5]

1. Greater the distance travelled by a body in unit time, greater is the speed.
2. Non-uniform motion has uniform velocity.
3. Volume is a fundamental physical quantity.
4. Fossil fuels like coal, petroleum and natural gas are called non-renewable resources.
5. A real image can be caught on the screen.

Q4. NAME THE FOLLOWING (Answer without spell errors): [5]

1. The surface occupied by any object.
2. Motion of an object in a straight-line path.
3. Capacity of a body to do work.
4. The bending of light rays when it travels from one medium to another medium.
5. Type of motion in which objects undergo both rotational and translatory motion along a surface.

Q5. MATCH THE FOLLOWING: [5]

1. SI unit of velocity	a. Kinetic energy
2. A car at rest	b. reflection
3. Moving bicycle	c. Absorption
4. Bouncing of light rays	d. m/s
5. Heating effect of light	e. Potential energy

Q6. GIVE REASONS FOR THE FOLLOWING: [10]

1. Mass of an object remains the same irrespective of the surroundings.
2. Musical instruments do not move as such, but produce vibratory motion.
3. We should carpool or use public transport.
4. The bottom of a cooking utensil is painted black.
5. A plane mirror always forms a virtual image.

SECTION B

(Answer all the questions as instructed)

Q7. ANSWER ANY FIVE OF THE FOLLOWING: [10]

1. Define speed of a moving body.
2. When can we say a body is at rest?
3. State the law of conservation of energy.
4. Define angle of incidence
5. Explain non-periodic motion.
6. Give two examples of mixed motion and explain.
7. What do you mean by point of incidence?

Q8. DISTINGUISH BETWEEN THE FOLLOWING: [10]

1. Volume and Density
2. Reflection and refraction
3. Scalar and Vector quantities
4. Uniform and non-uniform motion
5. Work and Energy

Q9. ANSWER THE FOLLOWING: [4 * 5 = 20]

1. A. (i) Calculate the area of a 1 m cube. [1]
   (ii) Express 1 m^3 in terms of mm^3. [2]
   (iii) A piece of metal has a mass of 100 g and volume 25 cm^3. Calculate its density. [2]

   (or)

   B. Define state of rest and motion of a body. List the different types of motion and explain any two with suitable examples.

2. A. Define the term Density. Explain in steps how will you determine the density of any substance.

   (or)

   B. Convert (a) 25 g / cm^3 to kg/m^3 [2]
   (b) 50 m/s to km/hr [1]
   (c) 3500 kg/m^3 to g/cm^3 [2]

3. A. With neat diagrams, explain in steps, the procedure to determine the volume of an irregular solid.

   (or)

   B. (i) The length, breadth and height of a room are 8 m, 5 m, and 3 m respectively. If the density of air is 1.29 g m^{-3}, Find the mass of the air in the room. [3]
   (ii) Convert 3 km min^{-1} to m s^{-1}. [2]

4. A. (i) State the laws of reflection. [2]
   (ii) Define regular and irregular reflection. [2]
   (iii) List the characteristics of images formed by a plane mirror. [1]

   (or)

   B. Define reflection of light. Draw a ray diagram illustrating reflection of light on a surface. Mark and define all the terms related to reflection.

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