

## Physics Revision worksheet[Final examination]

### Class8

Q1 State the reasons for the following questions.

- a] Why is the hand flour grinder provided with a handle at the rim?
- b] Why is the foot paddle at a large distance from the axle?
- c] Why do school bags have broad straps?
- d] Why do the pillars of a bridge have a broader base than the top?
- e] Why do pins and drawing pins have a narrow and sharp tips?
- f] Why does a pencil appear to be bent when placed in water?
- g] How does the refractive index of a transparent medium affect the speed of light passing through it?
- h] Which mirror is used by a dentist and why?
- i] Which mirror is diverging in nature?
- j] Why solids expand least on heating?
- k] A glass tumbler cracks on heating. Why?

Q2 State the S.I. units of the following.

- i] Force ii] Pressure Energy iv] Loudness/Intensity v] Current vi Work vii] Power viii] Time

Q3 Give the technical terms:

- i) A pair of equal and opposite parallel forces acting at two different points of a body.
  - ii) Amount of force acting per unit area.
  - iii) A physical quantity which changes or tends to change the state of rest or motion of a body.
  - iv) The turning effect of the force about a fixed point.
  - v) A force is applied on a body and the body gets displaced in the direction of force applied.
  - vi) The distance between the pole and the focus.
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Q4 Answer in short-

- i) State the factors on which kinetic energy depends.
- ii) Keeping the force same, if the area is doubled, what will happen to the force?
- iii) How will a light ray go when it passes through centre of curvature of a concave mirror?
- iv) Is the work done by a body, when displacement of a body is zero?
- v) Name the factors which decide the linear expansion in a metallic rod.
- vi) The radius of curvature of a concave mirror is 20cm. What is its focal length?
- vii) Which mirror always forms virtual, erect and enlarged image?
- viii) Where is the pressure of the sea greater 10m from the bed of the sea or 5m from the bed of the sea?

Q5 Solve the numerical:

- i) The area of the tip of the drawing pin is  $0.04\text{mm}^2$ . What is the pressure applied by it if a force of 40N acts on it.
- ii) A child does 30J of work, when he pushes the table with a force of 200N. What is his displacement?
- iii) An object moving with a speed of 35 m/s has a kinetic energy of 9800J. What is the mass of the object?
- iv) Calculate the potential energy in the following situation-  
A cat weighing 4kg, sitting on a roof 8m above the ground. [ $g=10\text{m/s}^2$ ]
- v) A cuboid weighs 300N, is placed on a floor on its side with dimensions 4m x 3m. Determine the pressure exerted by it on the ground.

Q6 complete the following:

- |  |   |
|--|---|
| i) $1\text{J} = \text{IN} \times \text{-----}$ | vii) $f = \text{-----} / \text{-----}$            |
| ii) $1\text{kJ} = \text{-----} \text{J}$       | viii) $u = \text{-----} / \text{-----}$           |
| iii) P.E. = ----- [formula]                    | ix) $P = \text{-----} / \text{-----}$             |
| iv) K.E. = ----- [formula]                     | x) $1\text{ N/m}^2 = \text{-----} / \text{-----}$ |
| v) $1\text{W} = \text{-----} / \text{-----}$   | xi) M.O.F = ----- / -----                         |
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vi)  $kW = \text{-----} W$

xii) -----image is obtained on screen.

Q7 Think and answer

- i) Which factor will have a greater effect on the kinetic energy of an object, doubling the mass or doubling the velocity?
- ii) Why does tea cool more rapidly in a saucer than in a cup?
- iii) Why does a paper catch fire if a concave mirror is used to focus sunlight?
- iv) How does the archer use the law of conservation of energy to hit his target?

Q8 Diagrammatic questions-

- i) Show the path of a light ray through a prism and a glass slab.
- ii) Show the image formation in a convex lens.
- iii) Show the image formation in a concave lens when the object is between  $f$  and pole.

[To be solved after completion of the syllabus]

Q9 [sound and electricity]

- i) How are loudness and amplitude related to each other?
  - ii) State the factors on which loudness depends.
  - iii) What is the difference in a flat and shrill sound? Which factor governs the pitch?
  - iv) Write the Hindi names of musical instruments.
  - v) State the laws of charges.
  - vi) Name different methods of charging.
  - vii) Draw a well labeled diagram of Gold Leaf electroscope.
  - viii) Differentiate between a conductor and an insulator [2 points]
  - ix) State the functions of G.L.E.
  - x) Draw the diagrams to show the charging of a conductor negatively by induction and conduction methods.
  - xi) State the factors on which pitch of an instrument depends.
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xii) Why is gold leaf electroscope enclosed in a glass case?

xiii) If a key of piano is first struck gently and then much harder, how will the loudness and pitch of the sound change?

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