



# Unique Past Papers Chapter Wise

## PHYSICS 9

(2018, 2019, 2021, 2022 & 2023)

**Lahore Board, Faisalabad Board, Multan Board, Gujranwala Board, Sahiwal Board, D.G. Khan Board, Sargodha Board, Rawalpindi Board & Bahawalpur Board.**

### Unit 1: Physical Quantities and Measurement

#### Introduction of Physics

- Q.1: Describe two advantages of physics in daily life. 2 Times  
 Q.2: Define Physics. 15 Times  
 Q.3: Define the term light. 3 Times

#### Physical Quantities

- Q.4: Write two characteristics of physical quantities. 1 Time  
 Q.5: Define physical quantities and derived quantities. 15 Times  
 Q.6: Define base quantities and write names of two/four basic quantities. 15 Times

#### International System of Unit

- Q.7: What is unit? 1 Time  
 Q.8: Define international system of units. 2 Times  
 Q.9: Pick out the base unit in the following:  
 Mole, ampere, metre, newton, watt. 1 Time

#### Prefixes

- Q.10: What is meant by prefixes? Give examples.



- Q.11: Express 4800,00 W in kilo and mega watt by using prefixes. 1 Time  
 Q.12: How many seconds are in a year? 3 Times  
**Q.13: Define scientific notation and express 0.00580 in scientific notation. 15 Times**

### Scientific Notation

- Q.14: Write in standard form 384000000 m and 0.00045 s.  
 Q.15: Write the numbers given in scientific notation. 1 Time  
 i. 0.0000000016 g ii. 6400000 km

### Measuring Instruments

- Q.16: Define least count and write least count of vernier calipers. 5 Times  
 Q.17: What you mean by zero error and zero correction?  
 Q.18: Write down the formula to calculate the least count of screw gauge. 2 Times  
 Q.19: When the zero error of screw gauge will be positive? 1 Time  
 Q.20: Write two names of measuring instruments. 1 Time  
 Q.21: Write four names of laboratory safety equipments. 3 Times  
 Q.22: Define least count and also write least count of meter rod. 6 Times  
 Q.23: Differentiate between positive zero error and negative zero error. 2 Times  
 Q.24: How many divisions are there on vernier scale? 1 Time  
 Q.25: Write two important parts of vernier calipers. 1 Time  
 Q.26: How least count of vernier calipers can be calculated? 1 Time  
 Q.27: What is screw gauge? 3 Times  
 Q.28: What is meant by Least Count of a screw gauge?  
 Q.29: What is meant by pitch of screw gauge? 1 Time  
 Q.30: Why a screw gauge measures accurately than vernier calipers? 5 Times  
 Q.31: When the zero error of screw gauge will be negative? 2 Times  
 Q.32: Define positive and negative zero error of a screw gauge. 1 Time  
 Q.33: What is stopwatch? Write the least count of mechanical stopwatch? 1 Time  
 Q.34: How to use digital stopwatch? 2 Times  
 Q.35: How is stop watch used? 4 Times  
 Q.36: Differentiate between mechanical stop watch and digital stop watch. 4 Times

### Mass Measuring Instruments

- Q.37: What is the use of physical balance? 3 Times  
 Q.38: What is the function of balancing screw in a physical balance? 1 Time  
 Q.39: Why digital electronic balance is more accurate than beam balance? 1 Time  
 Q.40: Define measuring cylinder and write its uses.



Q.41: How can we measure the volume of an irregular shaped solid? 4 Times

### Significations Figures

Q.42: Write down rules to find the significant digits.

Q.43: Round off 1.35 and 1.43. 2 Times

Q.44: Write two rules of significant figures. 1 Time

Q.45: How is precision related to the significant figures in a measured quantity? 1 Time

Q.46: Find the base quantities involved in each of the following derived quantities.

a) speed      b) volume      c) force      d) work

**Q.47: Estimate your age in seconds. 15 Times**

Q.48: What role SI units have played in the development of Science? 4 Times

Q.49: What is meant by vernier constant?

Q.50: What do you understand by the zero error of measuring instrument? 3 Times

Q.51: Why the use of zero error is necessary in measuring instrument? 3 Times

Q.52: Why we need to measure extremely small interval of times? 2 Times

Q.53: What is meant by significant figures of a measurement?

## Unit 2: Kinematics

Q.1: Define kinematics. 2 Times

### Motion and its Types

Q.2: Define motion also write its types. 2 Times

Q.3: What is meant by Brownian motion? 1 Time

Q.4: How is vector represented? OR Write the two methods to represent the vectors. 6 Times

### Terms Associated with Motion

Q.5: Cheeta can run at a speed of 70km/h. Convert this speed in SI unit. 1 Time

**Q.6: Define position and give example. 9 Times**

Q.7: Falcon can fly at a speed of 200km/h. Change this speed in SI unit. 1 Time

Q.8: Define speed and write its unit. OR Define speed and write its formula. 4 Times

Q.9: Differentiate between variable and uniform speed. 2 Times

Q.10: What is Lidar gun? 4 Times

Q.11: Define terminal velocity. 2 Times

**Q.12: Define uniform speed and uniform velocity. 14 Times**



- Q.13: Define velocity and write its equation. **5 Times**  
 Q.14: A player covers 80 m distance in 10 seconds. Find its average speed. **1 Time**  
 Q.15: Define constant speed and variable speed. **1 Time**  
 Q.16: What is difference between positive acceleration and negative acceleration? **8 Times**

### Graphical Analysis of Motion

- Q.17: Draw the graph of constant speed. **3 Times**  
 Q.18: Define independent variable and dependent variable with respect to graph. **1 Time**  
**Q.19: Write equations of motion for uniformly acceleration motion. 7 Times**

### Equations of Motion

- Q.20: Convert  $20\text{ms}^{-1}$  speed in  $\text{kmh}^{-1}$ . **2 Times**  
 Q.21: Convert  $50\text{kmh}^{-1}$  speed of a body into  $\text{ms}^{-1}$ . **3 Times**  
 Q.22: Convert  $36\text{km/h}$  to meter per second. **4 Times**  
 Q.23: Speed of a car is  $72\text{kmh}^{-1}$ . Convert this speed in  $\text{ms}^{-1}$ . **2 Times**  
 Q.24: Convert  $1\text{ms}^{-1}$  into  $1\text{kmh}^{-1}$ . **1 Time**

### Motion of Free Falling Bodies

- Q.25: Write three equations of motion for bodies moving under gravity. **2 Times**  
 Q.27: What was Galileo's view about freely falling bodies? **1 Time**  
**Q.28: Explain translator motion and give example of various type of translator motion. 15 Times**  
**Q.29: Differentiate between Rest and motion. 10 Times**  
**Q.30: Differentiate between Distance and displacement. 15 Times**  
 Q.31: Differentiate between Speed and velocity. **2 Times**  
 Q.32: Differentiate between scalars and vectors. **3 Times**  
 Q.33: Define speed, velocity and acceleration. **4 Times**  
**Q.34: Can a body moving at a constant speed have acceleration? 8 Times**  
**Q.35: How can vector quantities be represented graphically? 12 Times**  
**Q.36: Why vector quantities cannot be added and subtracted like scalar quantities? 8 times**  
**Q.37: How are vector quantities important to us in our daily life? 13 Times**

## Unit 3: Dynamics

- Q.1: Define dynamics. **6 Times**

### Force, Inertia and Momentum

- Q.2: A body of mass  $2\text{kg}$  is moving with a velocity of  $2\text{ms}^{-1}$ . Find its momentum. **4 Times**



## Newton's Law of Motion

- Q.3:** Define Newton's second law of motion and give its equation. 7 Times  
**Q.4:** Define weight and write its unit. 1 Time  
**Q.5:** State Newton's third law of motion and write two examples. 12 Times  
**Q.6:** What is meant by isolated system? 1 Time  
**Q.7:** If a book is lying on a table explain about action and reaction. 1 Time  
**Q.8:** What is Atwood machine? Give its one use. 7 Times

## Friction

- Q.9:** Why friction opposes motion? 1 Time  
**Q.10:** Define centripetal acceleration and write its equation. 2 Times  
**Q.11:** Define force. 15 Times  
**Q.12:** Define inertia. 14 Times  
**Q.13:** Define force of friction. 3 Times

## Uniform Circular Motion

- Q.14:** Define centripetal force. 15 Times  
**Q.15:** What is the difference between Mass and weight? 6 Times  
**Q.16:** What is the difference between action and reaction? 15 Times  
**Q.17:** What is the difference between sliding friction and rolling friction? 7 Times  
**Q.18:** What is the law of inertia? 9 Times  
**Q.19:** Why is it dangerous to travel on the roof of a bus? 1 Time  
**Q.20:** How can you relate a force in changing the momentum of a body? 2 Times  
**Q.21:** What will be the tension in a rope that is pulled from its ends by two opposite forces 100 N each? 3 Times  
**Q.22:** Action and reaction are always equal and opposite. Then how does a body move? 4 Times  
**Q.23:** A horse pulls the cart. If the action and reaction are equal and opposite then how does the cart move? 2 Times  
**Q.24:** What is law of conservation of momentum? 3 Times  
**Q.25:** Why is the law of conservation of momentum important? 4 Times  
**Q.26:** When a gun is fired, it recoils why? 2 Times  
**Q.27:** Describe two situations in which force of friction needed. 3 Times  
**Q.28:** How does oiling the moving parts of a machine lower friction? 2 Times  
**Q.29:** Describe ways to reduce friction. 15 Times



- Q.30: Why rolling friction is less than sliding friction?** 12 Times  
 Q.31: What do you know about Tension in a string? 2 Times  
**Q.32: What do you know about Limiting force of friction?** 8 Times  
 Q.33: What do you know about braking force? 4 Times  
 Q.34: What do you know about seat belts? 1 Time  
 Q.35: What do you know about banking of roads? 3 Times  
 Q.36: What do you know about cream separator? 1 Time  
 Q.37: What would happen if all friction suddenly disappears? 2 Times  
 Q.38: Why the spinner of a washing machine is made to spin at a very high speed?

## Unit 4: Turning Effect of Forces

### Like and Unlike Parallel Forces

- Q.1: Define parallel forces. Write names of its types. 1 Time

### Addition of Forces

- Q.2: Define resultant of forces and explain by diagram. 2 Times  
 Q.3: What is Head to Tail Rule? Explain with example. 3 Times

### Resolution of Forces

- Q.4: Define resolution of forces and its perpendicular components.** 15 Times  
 Q.5: In a right angled triangle length of base 4 cm and its perpendicular is 3 cm. Find its hypotenuse. 3 Times  
 Q.6: In a right angled triangle length of base is 4 cm and its perpendicular is 3 cm. Find  $\tan \theta$ . 1 Time  
 Q.7: What is meant by graph? 2 Times  
 Q.8: A force acts at an angle  $\theta$  with x-axis. Write down equations to find its rectangular components. 1 Time

### Moment Arm of a Force

- Q.9: Differentiate between axis of rotation and moment arm.** 15 Times  
 Q.10: Differentiate between line of action of force and moment arm. 5 Times  
 Q.11: On doubling the momentum arm, what will be its effect on the value of torque? 4 Times  
 Q.12: Define like parallel forces and moment arm. 3 Times  
 Q.13: Define rigid body and line of action of forces. 2 Times

## Principle of Moments

- Q.14: Write the principles of moments. 15 Times  
 Q.15: Differentiate between clockwise and anti-clockwise moment. 3 Times

## Center of Mass

- Q.16: What is plumb line? OR Define plumb line. 2 Times  
 Q.17: Where are the centre of gravity of uniform square and uniform triangular sheets? 2 Times

## Couple

- Q.18: What is meant by couple of forces? 12 Times

## Equilibrium

- Q.19: Define equilibrium and also give an example. 1 Time  
 Q.20: Why are vehicles made heavy at the bottom? 7 Times  
 Q.21: Define resultant vector. 5 Times  
 Q.22: Define torque. 10 Times  
 Q.23: Define centre of mass of a body. 15 Times  
 Q.24: Differentiate between like and unlike parallel forces. 15 Times  
 Q.25: Differentiate between torque and couple. 4 Times  
 Q.26: Differentiate between stable equilibrium and neutral equilibrium. 2 Times  
 Q.27: How head to tail rule helps to find the resultant forces (vectors)? 1 Time  
 Q.28: How can a force be resolved into its rectangular components? 9 Times  
 Q.29: When a body is said to be in equilibrium? 15 Times  
 Q.30: Explain the first condition for equilibrium. 1 Time  
 Q.31: Give an example of a moving body which is in equilibrium. 4 Times  
 Q.32: Think of a body which is at rest but not in equilibrium. 9 Times  
 Q.33: Why a body cannot be in equilibrium due to single force acting on it? 9 Times
- Q.34: Why the height of vehicles is kept as low as possible? 9 Times

# Unit 5: Gravitation

## The Force of Gravitation

- Q.1: What do you know about G? Also write its value. 1 Time  
 Q.2: Why we can not feel gravitational force around us? 3 Times  
 Q.3: Write the value and unit of gravitational constant "G" in SI units. 2 Times  
5 Times



- Q.4: Define gravitational field.** 10 Times  
 Q.5: What is the direction of gravitational field? 2 Times  
 Q.6: Define field force and gravitational field strength. 3 Times  
 Q.7: Why the gravitational force is non-contact force? 1 Time

### Mass of the Earth

- Q.8: Define mass of earth. 6 Times  
 Q.9: If R is doubled then what will be change in  $g = \frac{GM_e}{R^2}$  equation? 3 Times

### Variation of g with Altitude

- Q.10: Define gravitational acceleration and write its value in SI units.** 14 Times  
 Q.11: What is the relation between the value of “g” and radius of Earth? 1 Time  
 Q.12: Write the values of following: 1 Time  
 a) Radius of Earth R                      b) Gravitational constant G:  
 Q.13: What is the numerical value of “g” at Sun and Mars? 3 Times  
 Q.14: What is difference between “g” and “G”? 4 Times

### Artificial Satellites

- Q.15: What is meant by satellite?** 15 Times  
**Q.16: State the difference between natural and artificial satellites.** 9 Times  
 Q.17: What is orbital speed of a low orbit satellite? 1 Time  
 Q.18: What is meant by global positioning system (GPS)? 2 Times  
 Q.19: What is the height and speed of geo stationary satellite from the surface of the earth? 6 Times  
 Q.20: Define Geostationary orbit. 6 Times  
 Q.21: What is meant by communication satellite? Write its height from the surface of Earth. 4 Times  
 Q.22: Why communication satellites appears stationary with respect to Earth? 1 Time  
 Q.23: How much Moon is away from the Earth and completes its cycle around the Earth? 4 Times  
 Q.24: Give the orbital speed formula for Artificial Satellite. 2 Times  
 Q.25: Define orbital velocity and write its formula. 3 Times  
 Q.26: Write the formula of orbital velocity of a satellite revolving close to the Earth. 1 Time  
 Q.27: What is meant by the force of gravitation? 3 Times





- Q.28: Do you attract the Earth or the Earth attracts you? Which one is attracting with a larger force? You or the Earth. 1 Time
- Q.29: What is field force? 5 Times
- Q.30: Explain, what is meant by gravitational field strength? 15 Times**
- Q.31: Why law of gravitational is important to us? 6 Times
- Q.32: Explain the law of gravitation. 15 Times**
- Q.33: Write equation to determine mass of Earth. 4 Times
- Q.34: Why does the value of  $g$  vary from place to place? 3 Times
- Q.35: What are artificial satellites? 1 Times
- Q.36: On what factors the orbital speed of satellite depends? 14 Times**

## Unit 6: Work and Energy

### Work

- Q.1: What is difference between work and energy? 1 Times
- Q.2: On which factors work depends? 2 Times

### Energy

- Q.3: Define Energy? Give its an example. 9 Times**

### Kinetic Energy

- Q.4: Velocity of mass 0.5 kg is  $20\text{ms}^{-1}$ . Find its kinetic energy. 1 Time

### Potential Energy

- Q.5: What is difference between kinetic energy and potential energy? 5 Times
- Q.6: What is work done in lifting a brick of mass 2kg through a height 5 m above the ground? 2 Times
- Q.7: Define gravitational potential energy and write its equation. 3 Times

### Forms of Energy

- Q.8: Define fission reaction. 1 Time
- Q.9: Define mechanical energy and write its types. 3 Times
- Q.10: Define heat energy? Write its some sources. 1 Time
- Q.11: Differentiate between electrical energy and light energy. 5 Time
- Q.12: Differentiate between mechanical energy and sound energy. 1 Time
- Q.13: Describe the uses of light energy. 1 Time
- Q.14: Write sources of chemical energy. 2 Times
- Q.15: Differentiate between mechanical and chemical energy. 2 Times



- Q.16: What is meant by nuclear energy? Write its peaceful use.** 8 Times  
 Q.17: How is energy produced from nuclear fuels? 5 Times

### Major Sources of Energy

- Q.18: Write two sources of non-renewable energy. 3 Times  
 Q.19: Write down the two disadvantages of fossil fuels. 3 Times  
 Q.20: How does energy produced by fossil fuels? 1 Time  
 Q.21: Write names of two renewable energy sources. 1 Time  
 Q.22: On what parts a heating system consist of? 3 Times  
 Q.23: Differentiate between solar cell and solar panel. 2 Times  
 Q.24: What is the second name of solar cell and how it made? 1 Time  
 Q.25: How do we gain energy from air? 1 Time  
**Q.26: Write two uses of wind energy.** 8 Times  
 Q.27: Define geothermal energy and elastic potential energy. 3 Times  
 Q.28: What is meant by energy from biomass? 4 Times  
 Q.29: Define wind energy. 1 Time  
**Q.30: Write the mass energy equation and value of speed of light.** 16 Times  
 Q.31: Write down two causes of thermal pollution. 1 Time  
 Q.32: Why an energy saver lamp is better than an electric lamp? 1 Time

### Efficiency

- Q.33: What is meant by an ideal system? 3 Times

### Power

- Q.34: A machine does 4 Joule of work in 2 sec, calculate its power. 5 Times  
 Q.35: Define joule and watt. 2 Times  
 Q.36: If a pump has power of 1120 watt convert it into horse power (hp). 2 Times  
 Q.37: Define work. What is the SI unit? 3 Times  
 Q.38: Why do we need energy? 4 Times  
**Q.39: Define energy, give two types of mechanical energy.** 15 Times  
 Q.40: Define K.E. and derive its relation. 2 Times  
 Q.41: Define potential energy and derive its relation. 1 Time  
 Q.42: Why fossil fuels are called non-renewable form of energy? 2 Times  
 Q.43: Which form of energy is most preferred and why? 1 Time  
 Q.44: Name the five devices that convert electrical energy into mechanical energy. 2 Times  
 Q.45: Name a device that converts mechanical energy into electrical energy. 4 Times



- Q.46: What is meant by the efficiency of a system? 3 Times  
 Q.47: What is meant by power? 1 Time

## Unit 7: Properties of Matter

- Q.1: Define matter and write name of its three states. 2 Times

### Kinetic Molecular Model of Matter

- Q.2: Write some important features of kinetic molecular model of matter. 15 Times  
 Q.3: Write four differences between solid and gas state of matter. 5 Times  
 Q.4: Write two properties of liquids. 1 Time

### Density

- Q.5: The mass of 5 litre of water is 5 kg. Calculate its density. 2 Times

### Pressure

- Q.6: Is pressure scalar or vector? Write its SI Unit. 1 Time  
 Q.7: What is meant by atmospheric pressure? 8 Times

### Atmospheric Pressure

- Q.8: Define atmosphere. 1 Time

### Pressure in Liquid

- Q.9: Write two examples of Applications of Pascal's law in daily life. 4 Times

### Principle of Floatation

- Q.10: A wooden block floats on water why? 2 Times  
 Q.11: Write one difference and one similarity between ships and submarines? 2 Times

### Elasticity

- Q.12: Differentiate between strain and tensile strain. 2 Times  
 Q.13: Differentiate between stress and strain. 15 Times  
 Q.14: Define deforming force. 5 Times  
 Q.15: Define Young's Modulus. 15 Times  
 Q.16: Does there exist a fourth state of matter? 1 Time  
 Q.17: What is meant by density? What is its S.I unit? 3 Times



- Q.18: Define the term pressure. Give its S.I units. 2 Times
- Q.19: What is barometer? 1 Time
- Q.20: Why meter is not suitable to be used in a barometer? 1 Time
- Q.21: Why does the atmospheric pressure vary with height? 5 Times
- Q.22: What does it mean when the atmospheric pressure at a place fall suddenly? 1 Time
- Q.23: State Pascal's law. OR Define Pascal's law. 15 Times**
- Q.24: What is meant by elastically? 15 Times**
- Q.25: State Archimedes principle.
- Q.26: What is up thrust? Explain the principle of floatation. 2 Times
- Q.27: Explain how a submarine moves up the water surface and down into water? 3 Times
- Q.28: Why does a piece of stone sink in water but a ship with a huge ship weight floats? 5 Times
- Q.29: What is Hooke's law? What is meant by elastic limit? 2 Times

## Unit 8: Thermal Properties of Matter

### Temperature and Heat

- Q.1: Define temperature. 7 Times
- Q.2: Define thermal equilibrium. 5 Times
- Q.3: Differentiate between heat and internal energy. 3 Times
- Q.4: Why is heat called as the energy in trans it? 1 Time

### Thermometer

- Q.5: Define thermometer and write its types. 2 Times
- Q.6: Write two characteristics of the liquid used in thermometer. 4 Times
- Q.7: Write the use and range of clinical thermometer. 2 Times
- Q.8: What is absolute zero? 3 Times
- Q.9: Define lower and upper fixed points. 9 Times**
- Q.10: Differentiate between freezing and melting point. 1 Time
- Q.11: Write the scales of temperature. 11 Times**
- Q.12: What are Kelvin scale and Fahrenheit scale? 6 Times
- Q.13: How can Celsius scale be converted into Kelvin and Fahrenheit scales? 9 Times**

### State of Change

- Q.14: How can matter be changed from one state to another? 1 Time



## The Evaporation

- Q.15: What is the effect of temperature on evaporation? 4 Times  
 Q.16: Describe two roles of Evaporation in our daily life. 1 Time

## Thermal Expression

- Q.17: Define thermal expansion. 1 Time  
 Q.18: What is meant by bimetallic strip? 7 Times  
 Q.19: Define co-efficient of linear thermal expansion and what is its SI unit? 11 Times  
 Q.20: What is the difference between linear thermal expansion and volume thermal expansion? 1 Time  
 Q.21: Define “volume thermal expansion” and “temperature co-efficient of volume expansion”? 7 Times  
 Q.22: Write any two uses of thermal expansion in our daily life. 10 Times

## Unit 9: Transfer of Heat

### Transfer of Heat

- Q.1: What is meant by transfer of heat? Write ways by which transfer of heat takes place. 15 Times  
 Q.2: Write the ways by which transfer of heat takes place. 8 Times

### Conduction

- Q.3: What is meant by conduction? 15 Times  
 Q.4: Write use of Styrofoam. 2 Times  
 Q.5: Describe conduction in solid, briefly. 1 Time  
 Q.6: Define thermal conductivity and write its equation.  
 Q.7: What is the effect of length of the solid on thermal conductivity? 4 Times  
 Q.8: In what factors flow of heat depends upon for solids?  
 Q.9: Define the rate of flow of heat and write its mathematical form. 13 Times  
 Q.10: Write any two factor on which rate of flow of heat depends. 3 Times  
 Q.11: Write uses of conductors and Non-conductors.  
 Q.12: Differentiate between conductors and non-conductors. 6 Times

### Convection

- Q.13: Differentiate between conduction and convection. 14 Times  
 Q.14: Define convection. 18 Times



- |  |                 |
|--|-----------------|
| Q.15: Why does sea breeze blow during the day?               | 1 Time          |
| Q.16: What is meant by gliding?                              | 4 Times         |
| <b>Q.17: What causes a glider to remain in air?</b>          | <b>15 Times</b> |
| Q.18: Write names of two expert Thermal riders.              | 4 Times         |
| <b>Q.19: Where is convection currents used?</b>              | <b>14 Times</b> |
| <b>Q.20: Define land breeze and sea breeze.</b>              | <b>15 Times</b> |
| <b>Q.21: What is Leslie's cube? Write its four surfaces.</b> | <b>9 Times</b>  |

### Radiation

- |  |                 |
|--|-----------------|
| <b>Q.22: Define radiation. Write down the factors at which the rate of emission of radiations depends.</b> | <b>15 Times</b> |
| Q.23: What is meant by global warming? What is its main cause?   | 1 Time          |
| Q.24: How does a glass of chilled water becomes hot after sometime?  | 1 Time          |
| Q.25: How does the heat reach us directly from a fire place?   |                 |

### Application and Consequences of Radiation

- |   |                 |
|---|-----------------|
| Q.26: Write two consequences of radiations?                             | 4 Times         |
| Q.27: We wear white and light coloured clothes in summer why?           | 2 Times         |
| Q.28: Why bottoms of cooking pots are made black?                       | 2 Times         |
| Q.29: Why metals are good conductors of heat?                           |                 |
| <b>Q.30: Explain why land breeze blows from land towards sea?</b>       | <b>10 Times</b> |
| Q.31: Explain why double walled glass vessel is used in thermos flask.  |                 |
| <b>Q.32: Why condition of heat does not take place in gases?</b>        | <b>7 Times</b>  |
| <b>Q.33: What measures do you suggest to conserve energy in houses?</b> | <b>8 Times</b>  |
| Q.34: Why transfer of heat in fluids takes place by convection?         | 4 Times         |
| Q.35: What is meant by convection current?                              |                 |
| <b>Q.36: How does heat reach us from the sun?</b>                       | <b>15 Times</b> |
| <b>Q.37: What is green house effect?</b>                                | <b>15 Times</b> |
| Q.38: Explain the impact of green house effect in global warming.       | <b>5 Times</b>  |



## Important Equations in Physics

<b>Equations</b>	
1	Speed = distance/time
2	Velocity = displacement/time
3	Acceleration = change in velocity/time
4	$S = V_{av}t$
5	$V_f = V_i + at$
6	$S = V_i t + \frac{1}{2} at^2$
7	$2aS = V_f^2 - v_i^2$
8	Average speed = total distance / total time
9	Average velocity = total displacement / time
10	Area of rectangle = $\frac{1}{2}$ (base)(width)
11	Area of triangle = $\frac{1}{2}$ (base) (height)
12	Area of trapezium = $\frac{\text{sum of parallel sides} \times \text{height}}{2}$
13	$V_f = V_i + gt$
14	$h = V_i t + \frac{1}{2} gt^2$
15	$2 gh = V_f^2 - V_i^2$

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