

# 10<sup>th</sup> Physics Guess Paper 2025

**These guess papers are prepared according to the new paper pattern 2025 issued by the board and based on SLOs.**

Your exam paper will be divided as follows:

- **25% Conceptual**
- **75% Knowledge-Based**
- **25% Analytical + Application-Based**

S.No	Most Important Short Questions (Chapter # 11)
1	Factors on which loudness of sound depends
2	How far away is the cloud where the flash occurred? (Speed of Sound = 332)
3	What is meant by silent whistle? Write its range.
4	How can we identify conductors and insulators by an electroscope?
5	What is meant by musical sound?
6	Why is ultrasound useful in the medical field?
7	What is the difference between pitch and quality of sound?
8	Label diagram of sound production from a vibrating tuning fork
9	Two bodies are oppositely charged with $500\mu\text{C}$ and $100\mu\text{C}$ charge. Find the force between the two charges if the distance between them in air is 0.5m.
10	What is silent whistle?
11	Calculate the sound intensity level of rustling of leaves.
12	Define Sound and write necessary conditions for the production of sound.
13	Draw the diagram of a variable capacitor.
14	Calculate the Intensity level of the faintest audible sound.
15	How loudness of Sound depends upon distance from Vibrating Object?
16	Define loudness and write the name of factors on which loudness depends.
17	What is the difference between the loudness and intensity of sound?
18	What is the difference between Loudness and Pitch?
19	Define Intensity of Sound and write its unit.
20	How is a Paper Capacitor manufactured?
21	Define Pitch of Sound.
22	What do you know about zero-bel?
23	What is the difference between pitch and Quality of Sound?
24	Describe the two factors on which the intensity level of noise depends.
25	Write any two uses of ultrasound.
26	The Capacitance of a Parallel Plate capacitor is $100\mu\text{F}$ . If the Potential Difference between 50 volts, find the value of charge stored on every plate.
27	Define loudness of sound.
28	Write down two damages of noise pollution.
29	What is meant by the intensity level of sound? What is its SI unit?

30	What is the audible frequency range for the human ear?
31	Calculate the frequency of a sound wave of speed 340 m/s and wavelength 0.5 m.
32	Which instrument is used to observe sound waves?
33	Define quality of sound and give an example.
34	How can the depth of sea be measured by ultrasonic?
35	Define quality of sound.
36	What is meant by audible Frequency Range?
37	Write down four characteristics of sound.
38	Define Pitch of Sound.

S.No	Most Important Short Questions (Chapter # 12)
1	Draw a ray diagram of image formation by a compound microscope.
2	Why in large shopping centres convex mirrors are used for security purposes?
3	What is meant by magnifying power? Write its format.
4	State Snell's law and write down its formula.
5	Show the types of reflection with diagram.
6	What is meant by critical angle? Draw its diagram.
7	A ray of light enters from air into glass. The angle of incidence is $30^\circ$ . The refractive index of glass is 1.52. Find the angle of refraction.
8	Determine the power of lens, if its focal length is 10cm.
9	State the laws of refraction of light.
10	Differentiate between convex and concave mirrors.
11	Why do we use refracting telescope with large objective lens of large focal length?
12	Write any two uses of light pipe in our daily life.
13	Define Power of a lens and write its unit.
14	What is the difference between near point and far point?
15	State Laws of reflection, show with diagram.
16	Draw the ray diagram for the virtual image formation in a plane mirror.
17	Under what conditions will a converging lens form a virtual image?
18	State Snell's Law and write its formula.
19	Describe the types of reflection with diagram.
20	What is refractive index? Write down its formula.
21	Define Refractive Index. Write its formula.
22	Under what conditions will a converging lens form a virtual image?
23	What is meant by farsightedness?
24	How can we see the printed words on a page?
25	Write down two laws of reflection of light.
26	An object is placed 6cm in front of a concave mirror that has focal length 10 cm. Determine the location of the image.

27	How do geophysicists learn about the internal structure of the Earth?
28	Determine the location of the image in a plane mirror.
29	Define Focal Length of the Mirror.
30	An object is placed 6 cm in front of a concave mirror that has focal length 10 cm. Determine the location of the image.
31	How can the defects of vision be corrected by two ways?
32	Define Power of Lens and write its units.
33	What is the relation between focal length and radius of curvature?
34	What is meant by Nearsightedness?
35	Find the value of critical angle for water (refracted angle = $90^\circ$ ). The refractive index of water is 1.33 and that of air is 1.
36	What is the difference between regular and irregular reflection?
37	Write two laws of refraction of light.
38	If an object is laying at 2F of a convex lens, then what will be the location of the image formed? Draw diagram.
39	What is meant by Nearsightedness?
40	State Snell's Law and write its formula.
41	Describe the types of reflection with diagram.
42	What is refractive index? Write down its formula.
43	Define Refractive Index. Write its formula.
44	Under what conditions will a converging lens form a virtual image?
45	What is meant by farsightedness?
46	How can we see the printed words on a page?

S.No	<b>Most Important Short Questions (Chapter # 13)</b>
1	How can we distinguish between conductors and insulators using an electroscope?
2	Define capacitance and its SI unit
3	Draw the electric field lines for two positive point charges
4	Draw the circuit diagram of three capacitors which are connected in series
5	Difference between variable and fixed capacitors
6	Draw the circuit diagram of variable and fixed capacitors
7	A charged rod attracts pieces of paper, after a while these pieces fly away, why?
8	What is meant by silent whistle? Write down its range
9	Define electroscope and draw its figure
10	Draw electric field lines for an isolated negative point charge
11	Define capacitance of capacitor and write its SI unit
12	Write two uses of capacitors
13	What are stethoscope and tuning fork?
14	Define capacitor and write its formula
15	Draw the labeled diagram of electroscope

16	What is meant by primary memory?
17	Is the charge on capacitors connected in series equal? Explain
18	What are variable capacitors?
19	Define electric field intensity and write down its SI unit
20	Draw a diagram of three capacitors which are combined in parallel
21	Draw electric field lines due to positive and negative charges
22	Define the electric field lines
23	In what direction will a positively charged particle move in an electric field?
24	Write down Coulomb's Law and its expression
25	Define the electric field
26	Draw the electric field lines for two oppositely and equally charged point charges
27	Draw the electric field lines for a unit +ve charge

S.No	Most Important Short Questions (Chapter # 14)
1	What is the difference between a cell and a battery?
2	What is the difference between electric current and conventional current?
3	Draw Schematic Diagram for measuring e.m.f of the battery.
4	Define kilowatt hour. How is it determined?
5	State Joule's Law.
6	Prove that $P = V^2 / R$ .
7	Differentiate between Conductor and Insulator with examples.
8	What is meant by M.R.I?
9	If two resistors with resistances 6 k $\Omega$ and 8 k $\Omega$ are connected in series, find the equivalent resistance.
10	What is meant by Ohmic and non-Ohmic Conductors?
11	State the Ohm's Law and write down its mathematical form.
12	Calculate the one-month cost of using a 50 W energy saver for 8 hours daily in your study room. Assume that the price of a unit is Rs. 12/-.
13	State Joule's Law and write its Mathematical Form.
14	Can a current flow in a circuit without potential difference?
15	Why is main power always supplied with A.C.?

16	Draw the circuit diagram of three resistors which are connected in parallel.
17	Define resistance and its unit.
18	The resistance of an electric bulb is $500\ \Omega$ . Find the power consumed by the bulb when a potential difference of $250\text{V}$ is applied across its ends.
19	Can current flow in an electric circuit without potential difference? Explain.
20	Draw the Maximum and Minimum Strength of Magnetic Field by Diagram.
21	If $R_1$ and $R_2$ are two resistors connected in series, then find the equivalent resistance.
22	Is electric intensity a vector quantity? What will be its direction?
23	Define electric current and its unit.
24	$5\text{C}$ charge passes through a wire in $10$ seconds, then what will be the value of current flowing through the wire?
25	Define Ohm's Law. Write its equation.
26	What are any two hazards of static electricity?
27	What is the function of an electroscope?
28	Draw a circuit diagram of Ohm's Law.
29	What is an electron volt? Explain briefly.
30	Define the unit of capacitance.
31	Which metal is used as the filament in an electric bulb? Write with a reason.
32	How can potential difference be measured?
33	Draw a circuit diagram of three resistances $R_1$ , $R_2$ , and $R_3$ connected in parallel combination.
34	Draw the circuit diagram of three resistors in series combination.
35	Prove that $1\ \text{kWh} = 3.6\ \text{MJ}$ .
36	Find the resistance if $V = 6\text{V}$ and $I = 2\text{A}$ .
37	State Joule's law. Write its equation.
38	How many watt-hours are there in $1000$ joules?
39	Can current flow in a circuit without potential difference?
40	What is electric power? Also, write its unit.
41	Draw the variation of direct current and alternating current with time by diagram.
42	What is the cause of electric current in electrolytes?
43	Define resistance and also write the name of its unit.
44	Draw the symbol diagram of Ammeter and Voltmeter.

S.No	<b>Most Important Short Questions (Chapter # 15)</b>
1	Write the working principle of an electric motor.
2	Describe the direction of force when a conductor is placed in a magnetic field.
3	What is meant by an ideal transformer? Write its power equation.
4	What is the function of an Ammeter and Voltmeter?
5	What is mutual induction?

6	Can a transformer operate on DC?
7	What is the difference between a generator and a motor?
8	What are tracers? Write one use of them.
9	Describe Fleming's Left Hand Rule.
10	Describe Fleming's Left Hand Rule to find the direction of force.
11	What is Lenz's law?
12	Can a transformer operate on direct current?
13	What is a transformer?
14	Define natural radioactivity.
15	Define mutual induction.
16	What is a transformer?
17	If a transformer is used to supply voltage to a twelve-volt model train, which draws a current of 0.8 A, calculate the current in the primary coil. The voltage of the AC source is 240 V.
18	Describe Right Hand Grip Rule in order to determine the direction of magnetic field of current-carrying conductor.
19	Define Electromagnet. How many poles does it have?
20	What is the difference between a generator and a motor?
21	Define Resistance and its SI Unit.
22	What is a transformer? On which principle does it work?
23	State Faraday's Law of electromagnetic induction.
24	State the rule by which the direction of lines of force of magnetic field can be determined.
25	State Fleming's left hand rule.
26	Write the factor affecting induced e.m.f.
27	What is the difference between stable nuclei and unstable nuclei
28	Define current and write its SI unit.
29	Draw a labeled diagram to illustrate the structure of an AC generator.

S.No	<b>Most Important Short Questions (Chapter # 16)</b>
1	Draw a diagram for the virtual image formed in a plane mirror.
2	What is meant by digitization?
3	Differentiate between analogue electronics and digital electronics.
4	Write the symbol and truth table of a NOT gate.
5	Define Boolean algebra.
6	What is the function of the control grid on a cathode ray oscilloscope?
7	Define NAND gate and write its truth table.
8	What is the difference between Analogue to Digital Converter and Digital to Analogue Converter?
9	What is meant by binary variables?

10	What is the function of an electron gun?
11	Define Cathode Ray Oscilloscope.
12	What is an electron gun?
13	Define Electronics.
14	What are two components of CRO?
15	Write the names of any four logic operations.
16	Define OR gate and write down its truth table.