

Lesson: 1. Laws of motion:

I Important 2 Mark Questions:

- ① Define: Inertia. Give its classification. $\times$
- ② a) Classify the types of force based on their application. $\times$
b) write a short notes on - O'ears.
- ③ Differentiate: Mass and Weight. $\times$
- ④ State the principle of momentum. $\times$
- ⑤ state Newton's Second law. $\times$
- ⑥ While catching a cricket Ball the fielder lowers his hands backwards. why?
- ⑦ How does an astronaut float in a space shuttle? $\times$
- ⑧ a) what is the weight of ~~the~~ a man has mass 60 kg
(i) at earth? (ii) at moon? $\times$
b) Calculate the velocity of a moving body of mass 5 kg whose linear momentum is 2.5 kgms^{-1}
- ⑨ Book back question: IV match the following.
- ⑩ Book back Qns: VII solve the given problems: ①, 2, 3, ④. $\times$
- ⑪ Refer table 1.1 $\rightarrow$ Action of forces $\rightarrow$ Sums. (Book back: VI $\rightarrow$ 3rd Qns)
- ⑫ Refer table 1.2 $\rightarrow$ Apparent weight of a person in a moving lift $\rightarrow$ Sums.
- ⑬ Define: (a) 1 newton (b) 1 dyne.

Important 4 and 7 Marks Qns:

- ① What are the types of inertia? Give an example for each type. *
- ② State and explain Newton's law of motion. *
- ③ Deduce the equation of a force using Newton's Second law of motion. *
- ④ State and prove the law of Conservation of linear momentum. *
- ⑤ a) State the universal law of gravitation and derive its mathematical expressions. *
- ⑥ give the application of universal law gravitation.
- ⑥ Describe the Rocket propulsion. *
- ⑦ Derive the Relationship between " g " and " σ "
- ⑧ a) What is Impulse? Explain with examples.
b) Write a short notes on - Apparent weight.

Prepared By
M. Abbas Muntun
B.Sc, B.Ed, M.A, M.Phil
B.T. Ann (Science),
For more materials from:
Ilahi high school youtube.

Lesson: 2 optics.

I Important 2 Marks Qns:

- ① a) What is refractive index? $\checkmark$
b) State: Snell's law.
- ② Draw a ray diagram to show the image formed by a Convex lense when the object is placed between F and 2F [Same ray diagram for object on "C" and placed between "F" and "C"] $\checkmark$
- ③ a) State Rayleigh's law of scattering.
b) Why does the sky appear in blue colour?
- ④ Differentiate Convex lens and Concave lens: $\checkmark$
- ⑤ Write the applications of (a) Convex lenses (b) Concave lenses. $\checkmark$
- ⑥ What is power of accommodation of eye? $\checkmark$
- ⑦ a) What are the causes of "Myopia"? $\checkmark$
b) Why are traffic signals red in colour?
- ⑧ a) Define: dispersion of light.
b) What is spectrum?
c) Name the colours in spectrum? $\checkmark$
- ⑨ Define: (a) Raman Scattering (b) Tyndall Scattering
(c) Mie scattering (d) Stokes lines and Anti-stokes lines.
- ⑩ a) Define: power of a lens. $\checkmark$
b) S.I unit of power of a lens is _____

- ⑪ Write the uses of Simple microscope.
- ⑫ Write the Advantages and Disadvantages of Telescopes.

II Important, 4, 7 Marks Questions:

- ① a) list any five properties of light. -X;
b) Write the laws of refraction.
- ② Explain the rules obtaining images formed by a Convex lens with the help of ray diagram. -X;
- ③ Differentiate the Eye defects: Myopia and Hypermetropia. -X;
- ④ Explain the Construction and working of a 'Compound Microscope'. -X;
- ⑤ Book Back Numerical Problems: VIII $\rightarrow$ ①, ② -X;
- ⑥ a) Write the Cartesian sign Convention. -X;
b) What is Magnification of a lens?
- ⑦ Explain the human structure of Eye with labelled diagram.
- ⑧ Explain the defects in human eye. How it will be rectify? draw with suitable diagram. -X;

Unit 3. Thermal physics

I Important 2 Marks Questions:

- ① Define: (a) one calorie (b) one kilo calorie.
- ② Distinguish between linear, areal and superficial expansion.
- ③ Distinguish between ideal gas and real gas.
- ④ State the following fundamental laws of gases:
 - (a) Boyle's law (b) Charles's law (c) Avogadro's law
- ⑤ Define: (a) Co-efficient of cubical expansion. (b) Co-efficient of real expansion (c) Co-efficient of apparent expansion.
- ⑥ (a) What is Absolute scale? (Kelvin scale)
 (b) 0 K is equal to = -273°C
- ⑦ Write the characteristic features of heat energy transfer.
- ⑧ Solved Problems: ①, ②.
- ⑨ Match the following: IV $\rightarrow$ Book back Qn.
- ⑩ Book back Numerical problems: VII - ①, ② Sums.

II Important 4, 7 Marks Questions:

- ① Derive the ideal gas equation.
- ② Explain the experiment of measuring the real and apparent expansion of a liquid with a neat diagram.
- ③ Explain the different types of expansion of solids.
- ④ Give the value of Coefficient of cubical expansion of the following materials:
 (a) Aluminium (b) Glass (c) Water (d) Mercury.

III Book back HOT Qns: IX

Unit 4. Electricity.

I Important, 2 Marks Questions:

- ①
 - a) S.I. units of electric current _____
 - b) What happens to the resistance, as the conductor is made thicker?
 - c) Name two devices, which are working on the heating effect of the electric current.
 - d) Why is tungsten metal used in bulbs, but not in fuse wires?
- ② Define: Electric potential and potential difference. ✕
- ③ State Ohm's law. ✕
- ④ Distinguish between the resistivity and conductivity of a conductor.
- ⑤ State True or False? (If false given correct the statement)
 - (a) Ohm's law states the relationship between power and voltage.
 - (b) The S.I unit for electric current is the Coulomb.
 - (c) One unit of electric energy consumed is equal to 1000 Kilowatt hour.
 - (d) The wiring in a house consists of series circuits.
- ⑥ Book back Qns: IV - Match the following. ✕
- ⑦ ~~Name~~ Write uses and symbols used in the following components.
 - (i) Resistor (ii) Ammeter (iii) Voltmeter (iv) Galvanometer
 - (v) LED (vi) Ground Connection.

- ⑧ Write the resistivity value of the following materials.
(i) Copper (ii) Nickel (iii) Glass (iv) Rubber.
- ⑨ Difference between the series and parallel circuits. ✕
- ⑩ (i) One horsepower is equal to _____
(ii) 1 kWh is equal to _____ J ✕
(iii) In India, domestic circuits are supplied with an Alternating Current of potential _____ and frequency _____
(iv) _____ is a conductor with highest resistivity
(v) The S.I units of Resistance is _____
(vi) The LED bulbs can produce with the help of chemical compounds like _____, _____
- ⑪ Please Refer All Book inside Solved Problems. ✕
- ⑫ Solved problems: 1, ②, ③, ④ ✕
- ⑬ HOT Qns: ①, ③ ✕

II Important 4, 7 Marks Questions:

- ① With the help of a circuit diagram derive the formula for the resultant resistance of three resistance Connected: (a) in Series and (b) in parallel. ✕
- ② (a) What is meant by electric Current?
(b) Name and define its unit. ✕
(c) Which instrument is used to measure the electric current? How should it be connected in a circuit?

- ③ a) State Joules law of heating. -X:
b) An alloy of nickel and chromium is used as the heating element. why?
c) How does a fuse wire protect Electrical appliances?
- ④ Explain about domestic Electric Circuits. (Circuit diagram not required).
- ⑤ a) What are the advantages of LED TV over the Normal TV?
b) List the merits of LED bulbs. -X:
- ⑥ Write a short notes on:
(i) Overloading and short Circuiting
(ii) Earthing (iii) Seven Segment Display.

Ilahi High School YouTube

Prepared By
M. Abbas Manthir
B.Sc, B.Ed, M.A, M.Phil
B.T. Assistant (Science).
Ilahi high school - Cumbum.
Theni dt.
Ilahi high school youtube channel
Search More videos

Ilahi high school Youtube channel

10th Science important 2,4,7 Marks Qns.

Unit 5. Acoustics Important 2 Marks Qns.

- ① a) What is longitudinal wave?
b) What is the audible range of frequency?
- ② a) What is the minimum distance needed for an echo?
b) Name three animals, which can hear ultrasonic vibrations.
- ③ Why does sound travel faster on a rainy day than on a dry day?
- ④ Explain, why the ceilings of concert halls are curved.
- ⑤ Mention two cases in which there is no Doppler effect in sound?
- ⑥ True (or) false (If false give the reason)
a) Waves created by the Earthquake are Ultrasonic.
b) The velocity of sound is high in gases than liquids.
- ⑦ Match the following:
1) Infrasonic - (a) Compressions
2) Echo - (b) 22 KHz
3) Ultrasonic - (c) 10 Hz
4) High pressure region - (d) Ultrasonography.
- ⑧ Classify the sound waves based on their frequencies.
- ⑨ Write the difference between the Sound and light waves.

- ⑩ What is meant by rarer and denser medium?
- ⑪ At what temperature will the velocity of sound in air be double the velocity of sound in air at 0°C ?
- ⑫ Solved Problems: ①, ②, ③ ✱
- ⑬ Book back Qns: VIth - 4th sum, VII - 3rd sum. ✱
- ⑭ Book back VIII: Refer All problems corner.

Important 4 and 7 Marks Questions:

- ① What are the factors that affect the speed of sound in gases? ✱
- ② What is meant by reflection of sound? Explain ✱
- reflection at the boundary of a rarer medium.
 - reflection at the boundary of a denser medium.
 - reflection at curved surfaces.
- ③
- What do you understand the term 'Ultrasonic vibrations'? ✱
 - State the three uses of ultrasonic vibrations.
 - Name three animals which can hear ultrasonic vibrations.
- ④ What is an echo? ✱
- State two conditions necessary for hearing an echo?
 - What are the medical applications of echo?
 - How can you calculate the speed of sound using echo?
- ⑤
- Define "Doppler Effect". ✱
 - Write the Applications of "Doppler Effect".

Unit: 6 Nuclear physics:

I Important 2 Marks Questions:

- ① a) Write any two elements which are used for inducing radioactivity? ✕
b) When and where was the first nuclear reactor built?
- ② Write any three features of natural and artificial radio activity. ✕
- ③ state Soddy and Fajan's displacement law. ✕
- ④ i) What is stellar Energy? ✕
ii) Which material protects us from radiation?
- ⑤ Fill in the blanks. ✕
(a) _____ is used to measure exposure rate of radiation in humans.
(b) The exposure of radiation may cause fatal diseases like leukemia is at the range of _____ R
(c) The radio isotope of _____ helps to increase the productivity of crops.
- ⑥ Define: (a) Becquerel (b) Roentgen.
- ⑦ Write the uses of a nuclear reactor. ✕
- ⑧ Write the preventive measures off from the exposure of radiation. ✕
- ⑨ Distinguish between Nuclear fission and Nuclear fusion. ✕
- ⑩ Explain Alpha decay and Beta decay

- (1) (11) Explain the Nuclear fission reaction with suitable example equation.
- (12) Book back Match the following Qns: ①, 2, ③, 4, ⑤ - X
- (13) Book back Numerical Problems Qns: ①, 2 - X
- (14) Book back H/O Qns: 1, 2, 3 - X
- (15) Solved Problems: 6.1, 6.2, ⑥.3, ⑥.4 - X

4 Important 4, 7 Marks Questions:

- ① Explain the process of Controlled and uncontrolled Chain reactions. X
- ② Compare the properties of Alpha, Beta and Gamma radiations. X
- ③ What is a nuclear reactor? Explain its essential parts with their functions. X
- ④ List out the uses of Radioactivity (Agriculture, Medicines X, industries, Archeological research).

10th Science

Half Yearly/ Public Exam

Centum Question Bank

Physics Part Only

Important 2,4,7 Marks Qns

Prepared By
M. Abbas Manthiri
B.Sc., B.Ed., M.A., M.Phil
B.T Assistant
Cell : 8940968432
For more videos search from
Ilahi High school YouTube.com