



BOARD OF SECONDARY EDUCATION, KARACHI

S.S.C. 1st Annual Examination — 2025 · Physics (Theory) Paper-I

Subject: Physics

Class: Class 9th (Science Group)

Year: 2025

Paper Code: A.E/1/65/I/120425/M | Medium: English | Time: 3 hours | Max. Marks: 60

SECTION "A" (COMPULSORY) MULTIPLE CHOICE QUESTIONS (MCQs) — Marks: 12

(i) Attempt all the parts of this section. (ii) Do not copy down the part of question. Write only the answer against the proper number of the part according to the question paper. (iii) Each question carries 1 mark.

1. Choose the correct answer for each from the given options:

(i)	Significant figures in 0.00109 are: ☆ 5 ☆ 3 ☆ 2 ☆ 4
(ii)	The shortest distance between two points is called: ☆ Diameter ☆ Displacement ☆ Speed ☆ Velocity
(iii)	The mostly used scale for clinical measurements is: ☆ Celsius scale ☆ Kelvin scale ☆ Fahrenheit scale ☆ None of these
(iv)	1 atm = ☆ $1.013 \times 10^2 \text{ Pa}$ ☆ $1.013 \times 10^3 \text{ Pa}$ ☆ $1.013 \times 10^5 \text{ Pa}$ ☆ $1.013 \times 10^{-5} \text{ Pa}$
(v)	$\pi r^2 h$ is formula of: ☆ Weight ☆ Momentum ☆ Power ☆ Volume
(vi)	If a machine performs 300J of work in 15 seconds, then its power will be: ☆ 20 watt ☆ 300 watt ☆ 1500 watt ☆ 4500 watt
(vii)	The S.I. unit of specific heat capacity is: ☆ $\text{J kg}^{-1} \text{K}^{-1}$ ☆ $\text{J kg}^{-1} \text{K}$ ☆ $\text{J kg}^{-1} \text{K}^2$ ☆ $\text{J kg}^{-2} \text{K}^2$
(viii)	Blowing up a balloon is an example of: ☆ pressure ☆ force ☆ power ☆ weight
(ix)	If horizontal and vertical components of a force are 3N and 4N respectively, then magnitude of force will be: ☆ 0.5N ☆ 2.5N ☆ 5N ☆ 5.5N
(x)	If the masses of two bodies and distance between them are tripled, then gravitation force will be: ☆ quadrupled ☆ doubled ☆ remain same ☆ halved
(xi)	The quantity that measures the inertia of a body is: ☆ Mass ☆ Force ☆ Weight ☆ Friction
(xii)	To reduce pressure on the students' shoulder, the shoulder pads of school bags should be: ☆ thin ☆ soft ☆ narrow ☆ wide

SECTION "B" (SHORT-ANSWER QUESTIONS) — Marks: 24

Note: Attempt any EIGHT (8) questions from this section. Each question carries Three (3) Marks.

2.	What do you mean by resolution of a vector? Also split the vector into its perpendicular components.
3.	Define pressure. Write down two factors affecting pressure.
4.	State and explain Hook's law.
5.	Define density. Also write its formula and SI unit.
6.	What is wind energy? Write down its two applications.
7.	Write any three differences between scalar quantity and vector quantity.
8.	A gun with a mass of 6 kg fires a bullet of mass 40 gram. Its velocity is 100 m/s. Calculate the recoil velocity of gun.
9.	A cylinder contains 120 cm^3 of air at pressure of 140kPa. What will be its volume if the pressure on it is increased to 840kPa?
10.	Calculate the power of a machine. If the machine performs 1800 Joules of work in 30 minutes.
11.	A ball falls down from top of height of 90m. How much time the ball will take to reach the ground?
12.	How much heat energy will be required to raise the temperature of 50g of water from 40°C to 70°C ? Where is Specific heat of water is $4200 \text{ J/Kg}^{-1} \text{K}^{-1}$.
13.	Fatima's weight is 900N on the Earth's surface. What will be her weight at the surface of moon?

SECTION "C" (DESCRIPTIVE-ANSWER QUESTIONS) — Marks: 24

Note: Attempt any FOUR (4) questions from this Section. Each question carries Six (6) marks.

14.	State Newton's law of gravitation. How can this law be used to derive the formula for calculating the mass of earth?
15.	Define momentum and write its SI unit. State and prove law of conservation of momentum.
16.	What do you mean by relative motion? Derive second equation of motion.
17.	Which variables describe completely the behavior of a gas on the basis of kinetic molecular theory (KMT)? Explain any one of them.

18.	Explain two types of equilibrium with examples on the basis of state of a body. Also write two conditions of equilibrium in detail.
19.	Define the following: (i) Specific Heat capacity (ii) Latent heat of vaporization (iii) Latent heat of fusion. Also write three benefits of high specific heat capacity of water.

Notes on this transcription

- This is an **original board sheet**: it prints the BSEK monogram and the paper code A.E/1/65//120425/M, and its header reads "CLASS IX-X (SCIENCE GROUP)". It is published here as Class 9 in line with Tayarri's classification.
- Transcribed from the English-medium printing. An Urdu-medium printing of the same paper is published separately.
- Board wording and unit spellings kept verbatim, including "Hook's law" for Hooke's law and, in Section B Q.12, the specific heat of water printed as $4200 \text{ J/Kg}^{-1}\text{K}^{-1}$.
- The source scan carries the publisher's ticks on the answer options; options are reproduced unmarked here, as no answer key is ever included.

Typeset by Tayarri from the original question paper. Free past papers — no login required.