

BOARD OF INTERMEDIATE EDUCATION, KARACHI
INTERMEDIATE EXAMINATION, 2016 (ANNUAL)

Date: 03.05.2016
9:30 a.m. to 9:50 a.m.

PHYSICS PAPER – I
(Science Groups)

Max. Marks: 17
Time: 20 minutes

The correct answers are highlighted in red colour.

SECTION 'A'
(MULTIPLE CHOICE QUESTIONS) – (M.C.Qs.)

Code No:PH-09

Write this Code No. in the Answerscript.

NOTE:

- i) This section consists of 17 part questions and all are to be answered. Each question carries one mark.
- ii) Do not copy the part questions in your answerbook. Write only the answer in full against the proper number of the question and its part.
- iii) The code of your question paper is to be written in bold letters in the beginning of the answerscript.
- iv) The use of scientific calculator is allowed. All notations are used in their usual meanings.

1. Select the most appropriate answer for each from the given options:

- i) The distance between the principal focus and the optical centre is called:
* Aperture * Radius of curvature * **Focal length** * Principal axis
- ii) If \hat{i} , \hat{j} and \hat{k} are unit vectors, then $\hat{k} \cdot \hat{i} \times \hat{j}$ is equal to:
* zero * **one** * \hat{j} * \hat{k}
- iii) The angle between centripetal acceleration and tangential acceleration in circular motion is:
* 180° * 0° * **90°** * 45°
- iv) Kitabul Manazir was written by:
* **Ibn-Al Haitham** * Al Razi * Abu-Rehan Al Beruni * Jabir bin Hayyan
- v) One radian is equal to:
* 1° * 75.3° * **57.3°** * 0.017°
- vi) One kilo watt hour is equal to:
* **$3.6 \times 10^6 J$** * $3.3 \times 10^9 J$ * $3.9 \times 10^6 J$ * $3.6 \times 10^9 J$
- vii) Two vibrating bodies, having slightly different frequencies, produce:
* Echo * **Beats** * Resonance * Polarization
- viii) If $\vec{A} \cdot \vec{B} = 0$, $\vec{A} \times \vec{B} = 0$ and $\vec{A} \neq 0$, then vector \vec{B} is:
* Equal to \vec{A} * Parallel to \vec{A} * Perpendicular to \vec{A} * **zero**
- ix) Kinetic friction is always:
* greater than static friction * equal to static friction
* **less than static friction** * zero
- x) The dimensions of G are:
* **$M^{-1}L^3T^{-2}$** * $M^2L^2T^{-2}$ * $M^{-1}L^2T^{-2}$ * MLT^{-2}
- xi) If velocity of a body is decreasing, the direction of acceleration is:
* in the direction of velocity * **opposite to the direction of velocity**
* perpendicular to the direction of velocity * 60° to the direction of velocity
- xii) The rate of change of angular momentum is also known as:
* Linear momentum * **Torque** * Force * Energy
- xiii) At a distance, equal to twice of the radius of the earth, above the surface of the earth, the value of gravitational acceleration will be:
* One half * One fourth * Four times * **One ninth**
- xiv) The range of audible sound is:
* 1 Hz – 19 Hz * **20 Hz – 20000 Hz**
* 21000 Hz – 24000 Hz * 25000 Hz – 50000 Hz
- xv) The conditions of interference in thin film are reversed due to:
* Diffraction * Phase coherence * Refraction * **Phase reversal**
- xvi) The magnifying power of a lens of focal length $\frac{1}{2}m$ is:
* 1 dioptre * **2 dioptres** * 50 dioptres * 100 dioptres
- xvii) This equation represents Bragg's Law:
* **$m\lambda = 2d \sin \theta$** * $m\lambda = d \sin \theta$ * $2m\lambda = d \sin \theta$ * $2m\lambda = 3d \sin \theta$

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