

NALANDA COLLEGE - COLOMBO 10

Unit Test

Grade 09

Science

Unit 14 – Reflecion and refraction of waves

Part I

❖ **Underline the most corrected answer.**

01. A feature of an image that can be obtained from a plane mirror.

- (1). Real (2). Upright (3). Inverted (4). Diminished

02. A pencil dipped partially in water seems to be broken at the water surface due to of light

- (1). reflection (2). translation (3). convergent (4). refraction

03. An instrument which is used to observe outside from a submarine or a bunker

- (1). Periscope (3). Prism binocular
(2). Kaleidoscope (4). Camera

04. The minimum distance should be between the obstacle and the observer to occur an echo

- (1). 17m (2). 15m (3). 16.5m (4). 20m

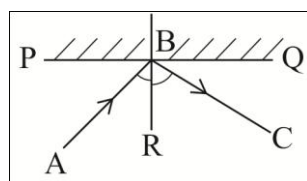
05. A letter that can be seen laterally invertedly,

- (1). O (2). A (3). S (4). T

06. Minimum number of light rays need to draw a ray diagram

- (1). 2 (2). 1 (3). 3 (4). 4

07. Consider the following ray diagram. Which of the followings indicates an angle of reflection?



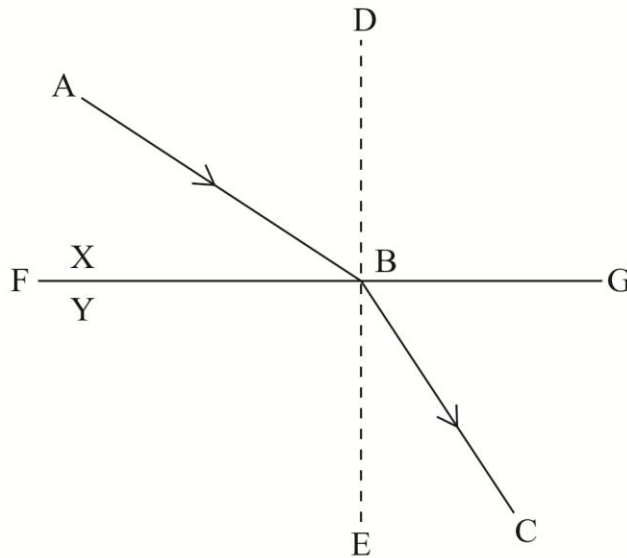
- (1). \hat{ABR} (3). \hat{RBC}
(2). \hat{PBA} (4). \hat{QBC}

08. The persistence of sound for a long time because of the disability to distinguish the original sound and the reflected sound is known as

- (1). Reflection (3). Reverberation
(2). Echo (4). Refraction

Part II

01. Consider the following ray diagram.



- i. Name the followings in the above diagram by using above letters.
 - (a) Incident ray
 - (b) Angle of refraction
 - (c) Point of incidence
 - (d) Interface
 - ii. Name suitable media for X and Y.
 - iii. What is the phenomena related to the light represented from the above ray diagram?
 - iv. Draw the ray diagram to show how light refracts through a block of glass.
 - v. Name 03 phenomena that can be seen in day-to-day life due to refraction of light.
 - vi. What is known as “dispersion of light”?
 - vii. Name 07 colours of the spectrum.
 - viii. Explain how the rainbow is occurred.
- 02.
- i. Explain simple activity that can be used to demonstrate reflection o sound.
 - ii. What is the difference between reverberation and an echo?
 - iii. State 03 methods used to prevent reverberation.
 - iv. Explain how bat can identify obstacles at night.
 - v. State 02 applications of reflection of sound.
 - vi. What is known as “SONAR”?

Prepared by: Mr. Indika Nawarathne