

# Class 10 Physics Test

Total points 3/12 ?

Attempt all the questions:

Email address \*

Name of Student:

Manan - G1101126

✓ 1. Which of the following property of waves does not change when it travels from one medium to another: \*

1/1

- ☐ velocity
- ☒ frequency
- ☐ wavelength
- ☐ amplitude



✓ 2. Which is the correct option for refractive indices of red and violet? \*

1/1

- ☐  $\mu_{\text{red}} > \mu_{\text{violet}}$
- ☐  $\mu_{\text{red}} = \mu_{\text{violet}}$
- ☒  $\mu_{\text{red}} < \mu_{\text{violet}}$



✗ 3. State lens formula. Also state what the symbols stand for. \*

.../2

$(1/v) - (1/u) = (1/f)$  where v is distance of image, u is distance of object and f is focal length. ✗

Correct answers

$$1/f = 1/v - 1/u$$

f = focal length, v = image distance, u = object distance

✓ 4. Which of the following relationship is correct? \*

1/1

- ☒ Refractive index = Real depth/Apparent depth ✓
- ☐ Refractive index = Apparent depth/Real depth
- ☐ Refractive index = real depth x apparent depth

✗ 5. State the position, nature and size of image formed by a convex lens if the object is kept between F and 2F. \* .../3

Beyond 2F2 ; Magnified, real and inverted. ✗

Correct answers

Beyond 2F on the other side

Real and inverted

Magnified



✗ 6. A ray of light incident on a lens parallel to its principal axis , after refraction passes through or appears to come from:

0/1

- ☒ its first focus
- ☐ its optical centre
- ☐ its second focus
- ☐ none of the above

✗

Correct answer

- ☒ its second focus

✗ 7. A convex lens forms an erect and 3 times magnified image of an object placed at a distance of 10 cm in front of it. Find: (a) the position of image (b) the focal length of the lens.

.../3

(a) Between F1 and optic centre.

(b) 15 cm

Feedback

$$m = +3, u = -10$$

$$(a) m = v/u \text{ or } 3 = v/u, \text{ or } v = 3u$$

$$v = 3 \times (-10) = -30 \text{ cm, image is 30 cm in front of the lens}$$

$$(b) 1/v - 1/u = 1/f, \text{ by solving } f = 15 \text{ cm. (So object is between focus and optical centre.)}$$

☐ Option 1

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