

ANSWERS

Chapter 1

1. (i) 2. (d) 3. (a)

Chapter 2

1. (d) 2. (b) 3. (d) 4. (c)

Chapter 3

1. (d) 2. (c) 3. (a) 4. (c)

Chapter 4

1. (b) 2. (c) 3. (b)

Chapter 5

1. (c) 2. (b)

Chapter 6

1. (c) 2. (a) 3. (d) 4. (b)

Chapter 7

1. (d) 2. (b) 3. (d)

Chapter 8

1. (b) 2. (c) 3. (d)

Chapter 9

1. (c) 2. (d) 3. (a)

Chapter 10

1. (d) 2. (d) 3. (b)
4. (a) 5. (d) 6. (c)

7. Distance less than 15 cm; virtual; Enlarged.

9. Yes

10. 16.7 cm from the lens on the other side; 3.3 cm, reduced; real, inverted.

11. 30 cm

12. 6.0 cm, behind the mirror; virtual, erect

13. $m = 1$ indicates that image formed by a plane mirror is of the same size as the object. Further, the positive sign of m indicates that the image is virtual and erect.

14. 8.6 cm, behind the mirror; virtual, erect; 2.2 cm, reduced.

15. 54 cm on the object side; 14 cm, magnified; real, inverted.

16. -0.50 m; concave lens

17. $+0.67$ m; converging lens

Chapter 11

- (b)
- (d)
- (c)
- (c)
- (i) -0.18 m; (ii) $+0.67$ m
- Concave lens; -1.25 D
- Convex lens; $+3.0$ D

Chapter 12

- (d)
- (b)
- (d)
- (c)
- Parallel
- 122.7 m; $\frac{1}{4}$ times
- 3.33Ω
- $4.8 \text{ k}\Omega$
- 0.67 A
- 4 resistors
- 110 bulbs
- 9.2 A, 4.6 A, 18.3 A
- (i) 12 W; (ii) 8 W
- 0.73 A
- 250 W TV set in 1 hour
- 120 W
- (b) High resistivity of alloys
(d) inversely.

Chapter 13

- (d)
- (c)
- (a)
- (d)
- (c)
- (a) False (b) True (c) True (d) False
- vertically downwards
- (i) The needle will move momentarily in one direction
(ii) The needle will move momentarily but in opposite direction to (i)
(iii) No deflection in the needle would be observed.
- (a) Right-hand thumb rule, (b) Fleming's left-hand rule, (c) Fleming's right-hand rule.

Chapter 14

- (b)
- (c)
- (c)

Chapter 15

- (a), (c), (d)
- (b)
- (d)

Notes

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