

# 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. (a)                      3. (d)                      4. (b)

## Chapter 6

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

## Chapter 7

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

## Chapter 8

1. (c)

## Chapter 9

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 10

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

### Chapter 11

- (d)
- (b)
- (d)
- (c)
- Parallel
- $122.7$  m;  $\frac{1}{4}$  times
- $3.33 \Omega$
- $4.8 \text{ k}\Omega$
- $0.67$  A
- 4 resistors
- 110 bulbs
- $9.2$  A,  $4.6$  A,  $18.3$  A
- (i)  $8$  W; (ii)  $8$  W
- $0.73$  A
- $250$  W TV set in 1 hour
- $1100$  W
- (b) High resistivity of alloys  
(d) inversely.

### Chapter 12

- (d)
- (c)
- (a) True (b) False
- vertically downwards
- (i) Right-hand thumb rule, (ii) Fleming's left-hand rule

### Chapter 13

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

## NOTES

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