A n s w e r s

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

1. (b) 2. (d) 3. (c) 4. (c)
5. (i) –0.18 m; (ii) +0.67 m
6. Concave lens; –1.25 D
7. Convex lens; +3.0 D

Chapter 11

1. (d) 2. (b) 3. (d) 4. (c)
5. Parallel 6. 122.7 m; ¼ times
7. 3.33 Ω 8. 4.8 kΩ 9. 0.67 A
10. 4 resistors 12. 110 bulbs
13. 9.2 A, 4.6 A, 18.3 A
14. (i) 8 W; (ii) 8 W
15. 0.73 A
16. 250 W TV set in 1 hour
17. 120 W
18. (b) High resistivity of alloys
    (d) inversely.

Chapter 12

1. (d) 2. (c)

3. (a) True (b) False

6. vertically downwards

7. (i) Right-hand thumb rule, (ii) Fleming's left-hand rule

Chapter 13

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

NOTES