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

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 12

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 13

1. (d) 2. (c) 3. (a) 4. (d) 5. (c)
6. (a) False (b) True (c) True (d) False
10. vertically downwards
13. (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.
15. (a) Right-hand thumb rule, (b) Fleming's left-hand rule, (c) Fleming's right-hand rule.

Chapter 14

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

Chapter 15

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