

11 Sensing the Environment

Part 1 Sectional Exercises

- 11.1 **A** 1. ears sound
(p.53) nose chemical substances with smell
 skin contact

- a. sight
- b. smell
- c. touch

- (p.54) **B** 1. eyes, skin
 2. eyes, skin, nose
 3. eyes, nose, tongue
 4. eyes, nose, tongue

- 11.2 **A**. focusing muscle iv
(p.54) **B**. cornea i
 C. iris vi
 D. pupil ii
 E. lens i
 F. retina iii
 G. yellow spot vii
 H. optic nerve v

- 11.3 **a**. limitations
(p.55) **b**. optical instruments
 c. Telescopes
 d. binoculars
 e. Hand lenses
 f. microscopes

- 11.4 **A** a. contracts
(p.56) b. thicker
 c. relaxes
 d. thinner
 e. long-sighted
 f. behind
 g. convex
 h. cataract
 i. red-green colour blindness

- (p.56) **B** 1. a short-sighted eye
 2. concave lens
 3. The light rays will be focused in front of the back of the flask.
 4. retina

- 11.5 **A** a. vibrate
(p.57) b. vacuum
c. medium
d. air
e. solids
f. liquids
g. frequency
h. hertz

- (p.57) **B** 1. pinna
2. ear canal
3. eardrum
4. ear bones
5. auditory nerve
6. cochlea

- (p.58) **C** 1. B
2. F
3. D
4. E
5. A
6. C

- 11.6 1. ×
(p.58) 2. ×
3. √
4. √
5. √

- 11.7 1. The loud, unnecessary and unpleasant sounds are called noises.
(p.59) 2. • Prolonged exposure to noise can lead to deafness.
• Noise can disturb sleep and cause stress.
3. They should wear ear protectors.

- 11.8 **A** A
(p.59) C
B
D

- (p.60) **B** 1. ×
2. √
3. ×
4. ×
5. √
6. ×

- 11.9 **A** a. brain
(p.60) b. nerves
c. sensations
d. illusions

- (p.61) **B** 1a. cerebrum
b. medulla
c. cerebellum

- 2a. B
b. A
c. C
d. B
e. A
f. A

11.10(4) → (5) → (3) → (1) → (2)
(p.62)

- 11.111. ×
(p.62) 2. ×
3. ×
4. √
5. √

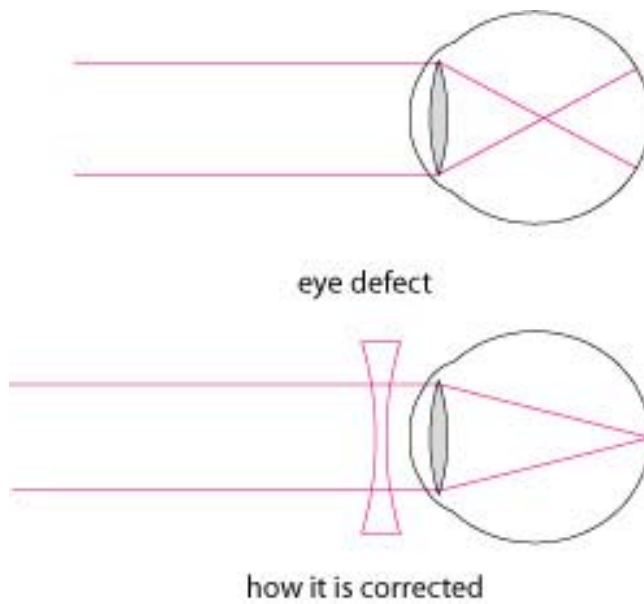
Part 2 Integrated Exercises

- (p.63) **A** 1. √
2. ×
3. √
4. ×
5. √
6. ×
7. √
8. √
9. √
10. ×
11. √
12. ×

- (p.64) **B**
1. C
 2. C
 3. B
 4. A
 5. C
 6. B
 7. C
 8. B
 9. B
 10. D
 11. A
 12. A
 13. A
 14. C
 15. C
 16. B
 17. B
 18. D

- (p.68) **C**
1. cornea
 2. pupil
 3. lens
 4. retina
 5. short sight
 6. cataract
 7. colour blindness
 8. pinna
 9. ear canal
 10. cochlea
 11. auditory nerve
 12. 20-20 000 Hz
 13. decibel meter
 14. vacuum
 15. noise
 16. taste buds
 17. smell receptors
 18. nerve endings
 19. brain

- (p.70) **D**
- 1a.
 - i. B, C, J, K
 - ii. F / G
 - iii. I
 - iv. D
 - v. K
 - b. H is the blind spot. Light cannot be detected.
- 2a. X
- b. short sight



- 3a. i. A
 ii. C
 iii. D
 b. F is the cochlea. It detects vibrations and changes them into a message.
 c. G leads to the brain. The person will not be able to hear anything if G is damaged.

- 4a. 7
 5
 b. No
 b. illusions

- (p.74) **E** *Across*
2. ear
 5. retina
 7. microscope
 10. pupil
 13. nose
 14. lens
 15. cerebrum
 16. cornea
- Down*
1. iris
 3. eardrum
 4. pinna
 6. telescope
 8. medulla
 9. optic nerve
 11. taste buds
 12. cochlea