

# Answers

## Summative Assessment

### Section A

- 1 C      2 A      3 C      4 C      5 C  
 6 D      7 B      8 A      9 D      10 A  
 11 A      12 B      13 D      14 C      15 C  
 16 C      17 D      18 D      19 B      20 D

### Section B

Method	Suspended solids (Examples: Clay and sand)	Dissolved substances (Example: Mineral salts)	Microorganisms
Boiling	✗	✗	✓
Filtration	✓	✗	✗
Chlorination	✗	✗	✓
Distillation	✓	✓	✓

- 2 (a) 

Food class
(i) Protein
(ii) Carbohydrate
- (b) 

Mineral
Calcium
Iron

Function
To form haemoglobin
To form healthy skin
To form strong bones and teeth
- 3 (a) (i) reflectors                      (ii) absorbers  
 (b) (i) Soft sound                      (ii) Loud sound
- 4 (a) (i) True                              (c) False  
 (b) False                                (d) False
- 5 (a) (i) solution                        (c) cloudy  
 (b) suspension                        (d) Solutions

### Section C

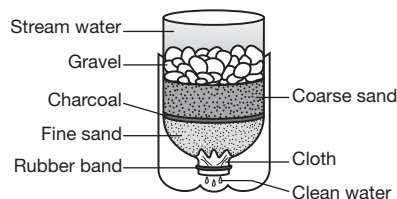
- 1 (a) The snack is not a healthy food because it has high calorie, total fat, saturated fat and sodium contents.  
 (b) (i) Could cause high blood pressure and cardiovascular diseases  
 (ii) High fibre or multigrain snacks  
 (c) Exercise regularly, practise eating a balanced diet and stop eating unhealthy snacks.  
 (d) To maintain good health
- 2 (a) (i) Parallel circuit  
 (ii) Current: 0.4 A  
 Voltage: 4.0 V  
 (iii)  $R = \frac{V}{I}$   
 $= \frac{4.0}{0.4}$   
 $= 10 \Omega$
- (b) The thicker wire has less resistance, thus a higher current flows through it. Therefore, the bulb lights up brightly. The

thinner wire has a higher resistance, hence a lower current flows through it. Therefore, the bulb lights up dimly.

- 3 (a) Interaction 1: Parasitism    Interaction 2: Prey-predator  
 (b) *Rafflesia* is a parasite that obtains benefits while the host (tree roots) will not benefit as it loses nutrients to *Rafflesia*.  
 (c) The relationship between ducks and snails is prey-predator. Ducks (predators) eat snails (prey).  
 (d) 1. Biological control method: Use geese  
 2. Chemical method: Use poisons to kill snails
- 4 (a) (i) Sugar cubes dissolve at a slower rate compared to fine sugar. / Fine sugar dissolves at a faster rate than sugar cubes.  
 (ii) The size of sugar affects its dissolving rate.  
 (iii) The smaller the size of the sugar, the higher the rate at which the sugar dissolves.

Beaker	The time taken for sugar to dissolve completely (s)
A	43
B	37
C	12

- (c) Stir quickly and use hot water
- 5 (a) (i) Sour  
 (ii) The moist blue litmus paper turns red.  
 (b) The pH value of the milk is less than 6.5 because the milk is spoilt due to bacterial actions that produce acid and causes the milk to turn sour and become coagulated.  
 (c) (i) To provide a larger surface area so that it is easier for the vinegar to diffuse into the mangoes.  
 (ii) Aluminium will react with the vinegar, which is acidic, causing the pickled mangoes to taste metallic and become toxic.  
 (iii) Advantage: As a preservative that allows the mangoes to last longer.  
 Disadvantage: The natural flavour of the fruit changes and its nutritional value decreases.
- 6 (a) C. Because its pH value is the nearest to 7, which is neutral, and contains the least amount of suspended solids.  
 (b) • Yes. Underground water is clean and free from chlorine.  
 • A tube well is reliable and could provide a continuous water supply.  
 • A tube well can provide an adequate water source for irrigation, which will increase crop yields, and in turn, improve the livelihood of the villagers.  
 (c) Suggested answer: Design:



Explanation:

- The layer of rocks and sand will filter the water from suspended solids.
- The cloth will filter fine particulate.