

## ANSWER KEY

SCHOOL : RAFFLES GIRLS' PRIMARY SCHOOL

LEVEL : PRIMARY 6

SUBJECT : SCIENCE

TERM : 2021 PRELIM

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	4	1	1	2	4	2	1	3	1
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	1	2	3	1	4	1	1	4	4
Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28		
3	3	2	3	1	1	1	1		

Q29	<p>a) A, C</p> <p>b) Line 3. The bread slice A is in a freezer, so it had no warmth which is needed for mould to grow as the temperature in freezer is very low, so no mould grew.</p>
Q30	<p>a) As X has a hairy body, the pollen grain from R will stick onto it's body easily and X can help transfer it from the Anther to the Stigma of a Female R flower.</p> <p>b) Animals. The fruit of R is eaten by animals and the tiny indigestible seeds will be passed out in its droppings, far away from parent plant.</p>
Q31	<p>a) i) Oxygen ii) Respiratory system</p> <p>b) stomata in leaves, it also helps in exchange of gases which is the function of Z.</p>

	<p>c) Plants need to take in gas R to photosynthesize to make food for themselves to survive.</p>
Q32)	<p>a) <math>200\text{cm}^3</math></p> <p>b) Increase. Air has mass, even though its volume does not change, its mass increases as the air is being compressed when more gas is being added.</p> <p>c) The air in the boat will gain heat from the sun and expand and air takes up space, not enough space for air, so the boat might tear.</p>
Q33)	<p>a) Doctor John's mask taped across the nose bridge and cheek, so when he speaks, water vapour cannot escape through the nose bridge or cheeks and no warmer water vapour will touch the cooler surface of the spectacle lenses and condense and lose heat to it into water droplets. Therefore not fogging up the spectacles.</p> <p>b) The difference in temperature of surrounding air and water vapour is smaller, so the spectacle lenses gain heat from surrounding air and temperature higher than it was in the room, so when water vapour touches the cooler surface of the lenses, it loses less heat and condenses lesser, causing it to fog lesser.</p>
Q34)	<p>The diagram shows a parallel circuit with a battery at the bottom. Three branches are connected to the battery. The top branch contains a 'music box' and a bulb labeled 'bulb X'. The middle branch contains a bulb labeled 'bulb Y'. The bottom branch contains a bulb labeled 'bulb Z'. Each branch has a switch in series with the component. The battery is represented by four cells.</p>
Q35)	<p>a) Magnet</p>

	<p>b) No. Silver is not a magnetic material, so it cannot be attracted by plate X which is magnetic. If it was silver, the mask would just remain on Amy's face even when Plate X is used to lift the mask.</p> <p>c) The magnet in the removal tool was weaker, so it has lesser magnetic force and removed lesser mask in the same amount of time.</p>
Q36)	<p>a) No. A and C have the same mass but different areas of contact on the ramp, but they still take the same time to reach the ground.</p> <p>b) It increases the frictional force between wheels and icy road surface, as icy road is slippery and has lesser friction, it is easy for car to slide, so snow-chained tyres increase friction between wheels and icy road to prevent car from sliding due to little friction between the wheels and the icy road.</p>
Q37)	<p>a) It changes the shape of the dough by flattening it.</p> <div data-bbox="459 1059 1117 1366" data-label="Figure"> <p>The figure is a line graph with two axes. The vertical axis is labeled 'gravitational force (N)' and has an upward-pointing arrow. The horizontal axis is labeled 'height of dough above the ground' and has a rightward-pointing arrow. The graph shows a horizontal line at a constant level on the vertical axis, extending to the right. From the end of this horizontal line, a diagonal line slopes upwards and to the right.</p> </div> <p>b)</p> <p>c) Tony exerted pushing force on flattened dough by tossing it into the air, the push force is greater than gravitational force pulling it down, so it was able to move up into air.</p>
Q38)	<p>a) Use a similar set-up without substance A.</p> <p>b) To ensure that other sources of light will not affect the amount of light detected by the light sensor and that all of the light detected is from the torch.</p> <p>c) Yes, changing the liquid affect the amount of light detected by light sensor.</p>
Q39)	<p>a)i) Place the metal lid instead of the glass jar into the hot water.</p>

	<p>ii) When you place the metal lid into the hot water, the metal lid will gain heat and expand, loosening the tight lid and hence, Ben can open the glass jar.</p> <p>c) Ice cubes Hot water</p>
Q40)	<p>a) The towel on the top of the stack will have a greater exposed surface area in contact with the cooler surrounding air compared to one of the rolled up towels on the top stack of A, thus it will lose more heat to the surrounding air, making it cooler than the rolled-up towels on the top stack of A.</p> <p>b) i) metal ii) wooden</p> <p>c) The temperature of towel A in the wooden box decreased slower. Wood is a poorer conductor of heat .</p>
Q41)	<p>a) Potential energy &gt; Kinetic energy &gt; Kinetic energy &gt; electrical energy &gt; light energy</p> <p>b) Lesser potential energy of water A, as it is at a lower position, convert into lesser kinetic energy of falling water convert into lesser kinetic energy of spinning waterwheel convert into lesser electrical energy in generator convert into lesser light energy in bulb, so bulb is dimmer.</p>