

## ANSWER KEY

YEAR : 2021

LEVEL : PRIMARY 6

SCHOOL : RGPS

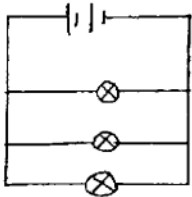
SUBJECT : SCIENCE

TERM : MID-YEAR EXAM

### SECTION A

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

Q29	<p>a) Her heart pumped blood containing oxygen, digested food and water faster to all parts of her body for the cells to release more energy for respiration so that she can exercise.</p> <p>b) Helen's pulse rate was higher than the pulse rate when she was fully at rest. She should have rested for a longer time.</p>
Q30	<p>a) As the temperature increased from <math>15^{\circ}C</math> to <math>30^{\circ}C</math> for the condition with light, the percentage of spores germinated increased. As the temperature increased from <math>30^{\circ}C</math> to <math>35^{\circ}C</math> for the condition with light, the percentage of spores germinater decreased.</p> <p>b) Surrounding temperature from <math>25^{\circ}C</math> to <math>30^{\circ}C</math> with light.</p>
Q31	<p>a) No water with bright light.</p> <p>b) Z is a living thing. The two hours is for Z to respond to the changes in its surrounding for more accurate results. To interact and respond to the changes in the environment.</p> <p>c) Mangrove tree habitat. It is dark and damp which are the most favourable conditions for Z to live in.</p>
Q32	<p>a) <math>X \rightarrow C \rightarrow A \rightarrow B</math></p> <p>b) A</p>

	<p>c) C will increase. X will receive more light, photosynthesize more and grow more. C feeds on X. There will be more X for C to feed on, so the population of C will increase.</p>
Q33	<p>a) Light is needed for the hydrilla to carry out photosynthesis.  b) Set up A: Purple  Set up B: Red  c) B is the control set up. It is to compare and confirm that the absence of carbon dioxide is due to the hydrilla carrying out photosynthesis.  d) The hydrilla did not receive light and could not photosynthesize, thus it took in oxygen and gave out carbon dioxide for respiration, so Y is yellow in the increased amount of carbon dioxide.</p>
Q34	<p>a) K increases the rate at which ice melts.  b) All the ice had gained heat from the surroundings and melted and dripped into the measuring cylinder.  c) This ensures that the rate at which the ice gains heat and melts is due to the presence of K and not the temperature of the surroundings.  d) Put a fan blowing at the measuring cylinder.</p>
Q35	<p>a) i) number of batteries  ii) voltage of batteries  b)</p>  <p>The diagram shows a battery symbol at the top of a rectangular circuit. Three parallel horizontal wires connect the battery to three light bulbs, each represented by a circle with a cross inside. The circuit is closed on the left and right sides.</p>
Q36	<p>a) When S1 is closed, it is a closed circuit and electricity can flow through. The iron rod will be electro-magnetised and attract the iron arm. The iron arm will close S2 and it is a closed circuit so electricity can flow through. Thus, the motor will spin.  b) Yes. Can pass through aluminium foil which is a non-magnetic material.</p>
Q37	<p>a) When he closed the switch, it is a closed circuit and electricity can flow through. The iron bar will be electro-magnetised and attract P as it is made of a magnetic material, but the electro-magnet will not attract Q as Q is made of a non-magnetic</p>

	<p>material. Thus, P will move towards the iron bar while Q will not.</p> <p>b) Material of the bar. The arrangement of the batteries.</p>
Q38	<p>a) Gravitational force and air resistance</p> <p>b) The braking distance will increase on a rainy day. The rainwater acts as a lubricant and decreases the amount of friction between the wheels of the bicycle and the road.</p>
Q39	<p>a) The lighted candle gives off light from the lighted candle enters Wilson's eyes.</p> <p>b) The paper lantern only allows some light given off by the lighted candle to pass through it and less light enters into his eyes. Thus, the flame looks less bright.</p>
Q40	<p>a) R is the best conductor of heat followed by S , Q , and P.</p> <p>b) D. The mass of unmelted wax was for P was the greatest as P is the poorest conductor of heat. The drinks will gain the least amount of heat from the surroundings and keep cold for the longest time.</p>
Q41	<p>a) Chemical potential energy → heat energy → kinetic energy → kinetic energy</p> <p>b) The spiral spins faster more chemical potential energy from the candle is converted onto more heat energy, result in more kinetic energy of the moving air, converted into more kinetic energy of the spiral.</p>