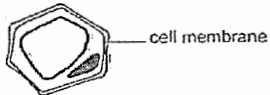


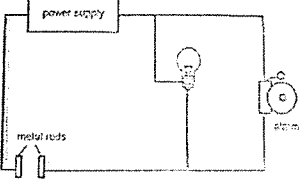
YEAR : 2021
LEVEL : PRIMARY 6
SCHOOL : AI TONG
SUBJECT : SCIENCE
TERM : MID-YEAR EXAM

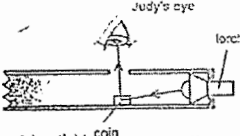
BOOKLET A

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

BOOKLET B

Q29 a)	
b)	Yes, The nucleus contains genetic information of the red pigment which is passed down from parents to young.
c)	When Sam cut G, some of the cell membrane were damaged, allowing the red pigment to move out making the water red.
Q30	<p>a) $A \rightarrow D \rightarrow B \rightarrow C$</p> <p>b) Dead leaves will be broken down into simpler substances by decomposers and returned to the soil as nutrients for the plants.</p> <p>c) K and M K has bright and small petals but M has dull and small petals. This ensures that the difference in results of the experiment is solely use to the colour of the petal and not the size of the petals. Hence, more bees are attracted to K.</p>
Q31	a) The flower has a strong scent to attract the animal pollinator. The flower grows on top of the stem to increase the chance of pollination as pollinators will be able to pollinate the flowers more easily without getting pricked.

	<p>b) Only birds have feathers.</p> <p>c) G will swallow the seeds of D and pass them out through its waste. This helps to disperse the seeds away from the parent plant and other young plants preventing overcrowding. The waste also provides additional nutrients for the germinating seeds.</p> <p>d) The needle-like leaves of D help to protect G and G's eggs from predators.</p>
Q32	<p>a) To allow the exchange of gases with the surroundings.</p> <p>b) With high levels of carbon dioxide, K can make more food and give out more oxygen. S can then take in more dissolved oxygen and grow better.</p> <p>c) Respiratory system</p> <p>d) He has lungs and he will not be able to take in dissolved oxygen in the water.</p>
Q33	<p>a) Prey : Y Predator : Z</p> <p>b) Z feeds on Y. When the population of Y increases, Z has more food and population of Z will increase. The population of X is not affected by the population changes of Y and Z.</p> <p>c) When algae increased rapidly, algae took in more dissolved oxygen. Therefore, there will not be enough dissolved oxygen for A and B, causing them to die.</p>
Q34	<p>a) Place the empty crushed plastic bottle into a container of hot water. The air in the empty crushed plastic bottle will gain heat from the hot water and expanded, causing the bottle to return to its original shape.</p> <p>b) The mass of the ping pong ball will be the same. No air was added or removed in the process, therefore, the amount of air particles in the ping pong ball is still the same.</p>
Q35	<p>a) Ability to float on water.</p> <p>b) Water level in the container will increase, causing the support to float up. The steel plate will touch the metal rods, forming a closed circuit causing the alarm will ring.</p> <p>c)</p> 

Q36	<p>a) As distance D increase, the amount of light detected by the light sensor decreases. When distance D is greater than 250cm, no light is detected.</p> <p>b) The light sensor is unable to detect light from the torch is more than 250cm away. The coin is too far away and the light rays will not be able to reach the coin to be reflected into Judy's eye.</p> <p>c)</p>  <p>The diagram shows a horizontal tube. On the right end, there is a torch. Light rays are shown as lines originating from the torch and pointing towards a small circle labeled 'coin' on the left end of the tube. From the coin, light rays are shown reflecting back towards a point labeled 'Judy's eye' at the very left end of the tube.</p>
Q37	<p>a) P and Q are magnets. The like poles of the P and Q were facing each other, causing them to repel and the cup to "float".</p> <p>b) The gravitational force acting on the cup will be greater than the magnetic force of repulsion between the two magnets.</p> <p>c) He could repeat the experiment at least two more times and ensure that his results are consistent.</p>
Q38	<p>a) Water enters the bottle through Y while air escapes through X. The water occupied the space previously occupied by the air, causing the bottle to sink.</p> <p>b) No. More than one material can sink in water.</p>
Q39	<p>a) A : gas B : liquid</p> <p>b) Both processes involve heat gain.</p> <p>c) Water in the wet cloth gained heat from the cake tin and evaporated. This causes the cake tin to lose heat faster to the wet cloth than the surrounding air causing the cake to cool down faster.</p>
Q40	<p>a) Gravitational potential energy → kinetic energy → kinetic energy → sound energy</p> <p>b) Ball B has more mass. When placed on top of the ramp, B will have more gravitational potential energy to be converted to more kinetic energy of the rolling ball, which will be converted to more kinetic energy in the marble allowing the marble to hit the buzzer with a greater impact.</p>