ANSWER KEY

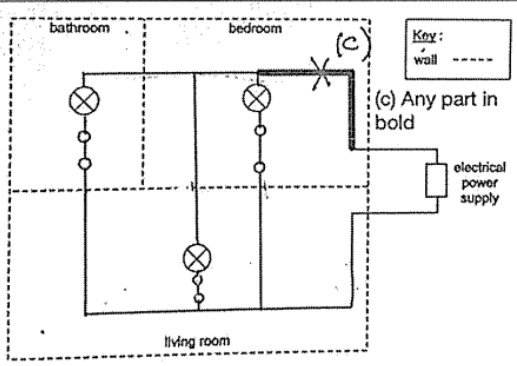
SCHOOL : ACS GIRLS' SCHOOL

LEVEL : PRIMARY 6

SUBJECT : SCIENCE

TERM : 2021 PRELIM

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

29(a)	P, U and T
29(b)	T is the small intestine where the **partially digested food is completely digested** in it and **absorbed into the blood stream** in it.
29(c)	S is the large intestine where **water is absorbed** from the undigested food.
30(a)	Fish Circulatory System: **Water containing dissolved oxygen enters the fish's mouth** and **passes through the gills**. The gills **absorbed the dissolved oxygen into the blood stream.** Human Circulatory System: **Air containing oxygen is taken in by the nose**, and **enters** down **the windpipe and into the lungs.** The lungs carried out gaseous exchange and **absorbed oxygen into the blood stream.**
30(b)	The **other parts of the body** carried out cellular **respiration** and **uses most of the oxygen in the blood**. Hence, the blood that enters at X and Y are poor in oxygen.
31(a)	By growing further away from the parent plants, the young plants will have **less effects of overcrowding** and **reduce the competition for sunlight, water, mineral salts/minerals/nutrients and space** with the parent plants.
31(b)	**Y.** Y is dispersed by the animal. **Y has hook-like structures that clings/hooks onto the fur of animals and Y will dropped off from the animals after the animals have moved further away from the parent plant.** Unlike X, it is dispersed by splitting method/explosive action, the **seeds of X are shot nearer from the parent plant** as compared to Y. Hence, **more young plants T are found further distance from the parent plant as compared to S.**
32(a)	**Fabric** can **hold** the **most number of 100g steel balls before tearing.**
32(b)	**Flexible** and **Strong**
32(c)	**Fabric.** It can **hold the most number of 100g steel balls before tearing**. So **fabric is the strongest** and is **least likely to break when making it as a bag to carry things.**
33(a)	1: When **one of the bulbs fuse, the other bulbs will not light as they are connected in series.** 2: The **bulbs connected in series as shown in the circuit above is less bright than if the bulbs are connected in parallel.**
33(b) 33(c)	

34(a)	**Sleeve Y has less surface area in contact between her hand and the cup of hot coffee as compared to sleeve X.** When using Y, **her hand gains less heat from the hot coffee** and she is able to **prevent her hand from getting burn**, hence, she is able to hold onto the cup of hot coffee with sleeve Y longer than X.
34(b)	The **double-walled glass has an air-filled gap** unlike the single-walled glass. As **air is a poor conductor of heat, the cold drink in the double-walled glass gains less heat/gains heat slower from the surrounding** as compared to the single-walled glass.
34(c)	The single-walled glass does not have a layer of air trapped unlike the double-walled glass. When **using the single-walled glass, the hot drink will lose less heat/lose heat faster to the surroundings** as compared to double-walled glass.
35(a)	Elastic Potential Energy → Kinetic Energy → Kinetic Energy
35(b)	As the **distance the rubber band was stretched back increases**, the **distance travelled by the iron cube increases**.
35(c)	Shift the iron peg into another hole such that the **iron pegs are the furthest apart.**
36(a)	Patrick wanted to find out **how the number of wire coiled around a fixed iron rod** affects the **magnetic strength of the electromagnet.**
36(b)	**Electromagnet X. X has more wire coiled around the fixed iron rod than Y**, making **X a stronger electromagnet than Y.** Hence, **X exerts a stronger magnetic force of attraction on the steel nail than Y**, causing the nail to move towards X.
36(c)	**Increase the number of coils of wire coiled around the fixed iron rod for electromagnet Y to be the same as electromagnet X.** **Replace the iron rod for electromagnet X with another rod made from different materials.**
37(a)	To ensure that the **distance travelled by the toy car is only due to the length of compressed spring and not due to the type of toy car used**.
37(b)	**Water is a lubricant** that **reduces the friction between the wheels of the toy car and the floor.**
37(c)	**Less than 20 cm.** The **toy car is moving against the direction of the pull of gravity.**
38(a)	**Flexible**
38(b)	When the **area of the sail is larger**, the **surface area of the sail in contact with the wind is greater, more wind from the fan will be trapped** by the sail, so the **same amount wind can give a stronger push on the sail**, allowing the toy boat to travel a greater distance.
38(c)	**Distance between the fan and the toy boat** must be kept the **same.** **Position of the toy boat at the start of the experiment** must be kept the **same.**
39(a)	Step 1: Pour water from the container into the measuring cylinder till the 100 ml water-level mark without spilling the water. Step 2: Place the stone gently into the measuring cylinder without spilling the water. Step 3: Read the new water level at eye-level. Step 4: Find the difference between the new water level and the water level at first.
39(b)	The stone is a **solid that occupies space** and **has definite volume**. The **water is a liquid that does not have a definite shape,** hence, allow the stone to sink to the water and displace the water upwards.
40(a)	The fans provided **more wind** to **increase the rate of evaporation of the water in the seawater.**

40(b)	The **metal block is a good conductor of heat** and **gains heat from the Sun to become hotter.** The **water in the seawater gains heat from the hotter metal block and evaporated** to become warm water vapour. The **warm water vapour comes into contact with the cooler inner side of the clear glass cover, loses heat and condenses to become water droplets.** The **water droplets slide down from the clear glass cover into the water collection dish due to gravity pull** and collected in the water collection dish.
40(c)	**Less surface area of the water is in contact with the metal block.** So the **water gained less heat from the metal block** and **less water will evaporated** to become less warm water vapour. So **less water vapour will condense to form less water droplets, hence, less water will be collected.**