ERC Standard Science 2025

PART 1 (2 marks each)

1.	(2)	11.	(3)	21.	(3)
2.	(1)	12.	(4)	22.	(2)
3.	(3)	13.	(3)	23.	(4)
4.	(4)	14.	(1)	24.	(2)
5.	(3)	15.	(3)	25.	(2)
6.	(1)	16.	(4)	26.	(3)
7.	(1)	17.	(2)	27.	(1)
8.	(2)	18.	(3)	28.	(4)
9.	(3)	19.	(1)		
10.	(4)	20.	(2)		

PART II (40 marks)

Qn	Answers	Marks	Remarks
29 (a) (i)	Pollination is the process where pollen grains from the anther is transferred to a stigma.	1m	
(ii)	Fertilisation is the process where a male reproductive cell fuses with a female reproductive cell.	1m	
(b)	More spiders will prey on insect B reducing the population of Insect B. There will be less Insect B to feed on A, so the population of A decreases.	1m 1m	
30 (a)	As the monthly rainfall decreases between the 1st and 6th month, the distance of seed dispersal decreases. After the 6th month, as the monthly rainfall started to increase, so did the distance of seed dispersal.	1m 1m	
(b)	Able to float, waterproof, fibrous husk, has air pockets.	1m each	Any two
31 (a)	He wanted to find out if the intensity/brightness of light affect the number of bubbles produced.	1m	
(b)	They wanted their result to be accurate and reliable.	1m	
(c)	The higher the light intensity, the more the number of bubbles produced / the higher the	1m	

	light intensity, the faster the rate of photosynthesis.		
32 (a)	The types of water must be the same / The type of water are different The types of beakers must be the same /the types of beakers are different	1m 1m	Without the word “the same” or “different” (0m)
(b)	The muddy water did not allow sunlight to enter the beaker. Thus the plant cannot make food and it will die.	½m ½m	
33 (a)	Matthew and Jeremy. The needle like leaves will stop the animals from getting near them. With tiny leaves, they will have very few stomata so the rate of evaporation is reduced.	1 m for each choice and reason	Prevent evaporation (0m)
(b)	They will reduce water loss through the leaves so they can maintain the temperature.	1m	
34 (a)	E. It scattered the furthest.	1m	
(b)	Any temperature between 2.8m to 3.8m	1m	
(c)	The higher the temperature, the further the seed will scatter.	1m	Must show relationship
35 (a)	The bacteria are killed due to high temperature	1m	
(b)	Fungi	1m	
(c)	The conditions were favourable for fungi to grow.	1m	
36 (a)	Angelfish	1m	
(b)	Pond skater or angelfish	1m each	
37 (a)	Kettle A has bigger surface area in contact with the flame [1] so it gains heat faster than Kettle B [1].	2m	Must show comparison
(b)	The surface area of the lizard touching the ground is small [1] so the lizard gains little heat from the ground [1] and feels less hot.	1m	
38 (a)	To ensure a fair test.	1m	
(b)	Higher. The black cloth traps hot air so the temperature in the jar increases.	1m 1m	
39 (a)	The copper rod is non-magnetic.	1m	
(b)	More coils. Increase the number of batteries	1m 1m	

40 (a)	The water vapour form their mouth is warmer than the air in the surrounding. When the warmer water vapour touched the cooler air (½m) in the surrounding, it will lose heat (½m) and condense(½m) to form water droplets (½m) which was seen as clouds.	2m	
(b)	liquid	1m	
(c)	There is not much difference in temperature of the surrounding compared to the body temperature.	1m	
41 (a)	potential energy→ kinetic energy	1m	
(b)	Gravity / gravitaitional force	1m	
(c)	The mass of A. The amount of force pulling the part B.	1m 1m	

NOTE: ½ mark to be deducted for misspelt key word.