

1. (a) (i) Tendril; Rej. wrong spellings. Accept plural. (1mk)
 (ii) Positive Thigmotropism / Positive Haptotropism; Rj. wrong spellings;
 (iii) Contact; Rj. Touch
 (iv) Due to contact; the auxins / IAA moved away from the surface of contact / accumulated on the surface away from contact; where they caused faster growth / cell elongation hence curling / coiling (around a support);
 (v) - Has tendril to provide support; (by coiling around firm support) / to reach for light.
 - Allow flowers to be exposed to pollinating agents.
 - Facilitates exposure of seeds and fruits to dispersal agents.
- (b) (i) Apical dominance.
 (ii) Cutting off the shoot at the apex removes the source of auxins that retard the development of the lateral buds. This leads to establishment of more side branches.
 (iii) Pruning of plants such as tea enables tea bushes to develop more side branches increasing the yield.

2. (ii) (a) L – Coagulates
 (b) stomach
Functions of HCL in the body
 - Creates right PH for stomach enzymes.
 - Kills any micro-organisms that enters with food.
 - Coagulates, milk making it hold together for easy action of digestive enzymes.
- (iii) (a) Permanent spot / mark is made.
 (b) Fats / Lipids present.
 (c) Permanent spot test / grease test / filter paper grease test.

FOOD BEING TESTED	PROCEDURE	OBSERVATION	CONCLUSION
STARCH	Add iodine (solution)	No colour change / colour of iodine solution retained.	Starch Absent
PROTEIN RESIDUE	Add NaOH followed by CuSO ₄ dropwise.	Purple colour observed	Proteins present

FOOD BEING TESTED	PROCEDURE	OBSERVATION	CONCLUSION
STARCH	Add iodine (solution)	Blue / black / blue-black	Starch Present
PROTEINS	Add NaOH followed by CuSO ₄ dropwise.	Violet / purple colour	Proteins present

3. (i) Longitudinal section;
 (ii) Parts labeled 1, 2 and 15
 1 – Renal vein
 2 – Renal artery
 15 – Ureter
 (iii) - Ionic balance in the body / Osmoregulation;
 - Excretion of metabolic wastes;
 - Regulate PH of body fluids; (2mks)
 (iv) Label on the photograph the region of the specimen where the glomerulus and Loop of Henle are located.
 (v)

Kangaroo rat	Tilapia
- Small and few glomeruli - Long loop of Henle	- Large and many glomeruli - Short loop of henle