– THE CELL

1. (a) - Secretion of useful substances

   - Formation of secretory vesicles

2. (a) - Destroying old and worn out organelles

   (b) - Secretion reticulum (rough)

   - Formation of secretory vesicles

3. (a) - Mitochondrion

   (b) - Chloroplast

4. - Ribosomes

   - Endoplasmic reticulum (rough)

5. (a) - X- chloroplasts

   - Y - Vacuole

   (b) In dim light. They move to the upper part of the cell in order to receive enough sunlight for photosynthesis

6. (a) - Increase surface area for attachment of respiratory enzymes hence increasing rate of respiration.

   (b) (i) Stroma

   (ii) Absorb sunlight used for light stage of photosynthesis

7. (a) $\text{Magnification} = \frac{\text{Length of the drawing}}{\text{Length of the object}}$

   (b) It is adding a dye to the specimen to make the features clearer and distinguishable

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8. - Form vesicles that ransport materials to other parts of the cell e.g. proteins

-Transport secretions to the cell surface for secretion e.g. enzymes and mucus.

- They form lysosomes

9. - Cell wall

   - Large vacuole

   - Chloroplast

   - Starch granules

10. (i) Reflect light from the source to the microscope/specimen

    (ii) Regulate amount of light entering the microscope/reaching specimen.

    (iii) Move body tube up and down in order to obtain a rough focus of the image of specimen.

11. It is the ability to differentiate two structures or organelles lying close

12. (a) A cell is structurally and physiologically modified in order to perform a particular function.

    (b) (i) Presence of dendrites to receive impulses

    (ii) Presence of chloroplasts to trap sunlight

    (iii) Elongated and no cuticles in order to absorb water

    (iv) Biconcave shape to increase surface area for diffusion of oxygen/haemoglobin.

13. 1 mm = 1000μm

3.5 mm = 3500 μm

10 cells = 3500 μm

1 cell = $\frac{3500}{10}$ μm

1 cell = 350 μm

14. (i) Made of several specialized cells grouped together and perform particular function.

(ii) Made of a group of specialized tissues grouped together performing a particular function

(iii) It is made of several organs that perform a particular function.