Biology Answer Grade 12 (Sub) Tutorial 1

Section A

1A	6A	11D	16D
2D	7A	12D	17D
3C	8C	13B	18B
4B	9A	14A	19D
5C	10D	15D	20C

Section B

1 a) A- Golgi Body

B- Nucleolus

C-Mitochondria

Functions

A- Processing and sorting out of substances such as enzymes from the ER; involved in the formation of lysosomes
B- Manufacture of ribosomes
C- Produce energy during aerobic respiration

b) Trachea; bronchi

c) traps dust particles

2 a) (i) H- Nucleus

J- golgi body

K- cell wall

L- Large central vacuole

(ii) No nucleus/ nuclear envelope in prokaryote

Prokaryote- Capsule around cell wall

3 a)

	Organelle	Function
B	Nucleolus	Make ribosomes
C	mitochondrion	Produce energy during aerobic respiration
D	Smooth ER	Synthesis of lipids and steroids
E	Rough ER	Synthesis of proteins

F Golgi Body Processing and sorting out of substances such as enzymes from the ER; involved in the formation of lysosomes

G Vacuoles/Lysosome Produce hydrolytic enzymes

4a) 3-D shape- hydrophobic interaction

b) 0.0% salt- hypotonic solution. Red blood cell absorbs water from surrounding medium, cells burst

0.4% salt- hypotonic solution but less than the first one. Red blood cell absorbs water from surrounding medium, cells do not burst

0.9% cells remain same size as the solution is isotonic, cells neither lose nor absorbs water

1.5% hypertonic solution, water leaves cells by osmosis; cells decreases in size.

3.0% smaller and shrived; excessive loss of water

c) cells absorbs water, swells and burst, normal plant cells have cell wall; keeps cell turgid; prevents cells from bursting

6a) Higher resolution

b) Envelope of nucleus, ER, ribosomes

c) Mag = size of image/actual size

d)(i) Amylose- Straight-chain of alpha-glucose

Amylo-pectin- Branched-chained of alpha-glucose

(ii) Make chlorophyll

7a) (i) xylem

(ii) support/mechanism

(iii) Phloem

b) Maintains mechanical strength

c)Osmosis- definition

d) Active transport- definition

e) Transpiration- loss of water from aerial part of the plant; movement of water up xylem by osmosis, capillarity, transpiration pull.