CHEMISTRY ONLINE
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BIOLOGY

FOUNDATIONS IN BIOLOGY

Level & Board	OCR (A-LEVEL)
TOPIC:	CELL STRUCTURE
PAPER TYPE:	SOLUTION - 2
TOTAL QUESTIONS	8
TOTAL MARKS	/29

Cell Structure - 2

1.

(a)

A = permanent / temporary vacuole

B = nucleolus

(b) x = 14000 / 1.4 x 10^4

(c)

No shading / cross hatches / AW

Add a scale / magnification

Add a title

(d)

Place stain at edge of sample (not the centre

Lower cover slip at an angle / use mounted needle

Use blotting paper to, remove excess stain / pull stain through

Use more than one stain to improve contrast

2.

(a)

Holds ribosomes in place

Controls what enters and leaves the rough endoplasmic reticulum

Compartmentalization - maintains different conditions from cell cytoplasm

3.

(a)

label

large permanent vacuole

Explanation

It is an air bubble

It spans more than one cell

A vacuole is inside one cell

(b)

Any three from:

Label lines should not cross

No arrowheads

No shading / colouring in

Give, magnification / scale

Give title

Draw cell walls as two lines

Draw organelles in proportion

4.

(a) To provide, lots of / much, energy / ATP

(b)

Golgi apparatus

To modify / process / package, protein

Ref. vesicles / secretion (of mucus) / exocytosis

5

(a)

Animal	Plant	Yeast	Bacter
		budding	
yes	yes	yes	no
	cellulose		peptidog
yes	yes	yes	yes

6.

(a) B: only 1 and 2

7.

(a)

Length / size similar to that of a bacterium

Contain circular DNA

Contain 70S / small / 20nm ribosomes

May have plasmids

I am Sorry !!!!

Have double membrane

(b)

Mitochondria are the site of ATP synthesis so more mitochondria means they would have had more ATP and energy to have higher metabolic activity such as protein synthesis

OR

Cells with mitochondria / early eukaryotes

Would be able to respire aerobically

This produces more ATP

ATP needed for, active transport / cell division / protein synthesis / DNA replication

More ATP allows faster metabolic, processes / reactions

8.

(a) A

