

Name of the Student: _____

Max. Marks : 19 Marks

Time : 19 Minutes

Mark Schemes

Q1.

(a) any **two** from:

- synthesis of new molecules
allow named molecule eg starch / glycogen / cellulose / lipids / fats / proteins / hormones / antibodies
- for active transport
- to keep warm (in mammals / birds)
allow description
allow to keep warm (in animals)
allow for movement (in animals)
allow for transmission of nerve impulses (in animals)

2

(b) mitochondria / mitochondrion

1

(c) both occur without oxygen

1

both release (a small amount of) energy

1

muscle cells produce lactic acid but plant cells produce ethanol

1

muscle cells do **not** produce carbon dioxide but plant cells do

marks can be awarded from correct word or balanced symbol equations

1

(d) the amount of oxygen needed to react with the lactic acid formed

allow the amount of oxygen needed to break down
or oxidise the lactic acid

1

[8]

Q2.

- (a) 2 640 000 (in remaining 24 years)

1

110 000 in each remaining year

or

2.64×10^6 in remaining 24 years

1

1.1×10^5

an answer of 1.1×10^5 scores 3 marks

1

- (b) (area of woodland =) 21 600

allow $16\,800 + 4\,800$

or $9\,000 + 12\,600$

or $4\,800 + 4\,200 + 12\,600$

1

518 400 (bluebells)

allow their area $\times 4 \times 6$

an answer 518 400 (bluebells) scores 2 marks

1

- (c)

Level 3: Relevant points are identified, given in detail and logically linked to form a clear account.	5-6
Level 2: Relevant points are identified, and there are attempts at logically linking. The resulting account is not fully clear.	3-4
Level 1: Relevant points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.	1-2
No relevant content	0
Indicative content reducing pollution - trees take in carbon dioxide - which will lower atmospheric greenhouse gases and reduce global warming (allow consequences of global warming) - trees act as noise absorbers - which will reduce noise pollution in the city - roots of trees will bind the soil - which will reduce local flooding and soil erosion - leaves on trees will trap PM2.5 / tiny particulates - which will reduce asthma/breathing difficulties of people increasing biodiversity - new woodlands or new trees in parks /	

gardens will provide new habitats • for new species of plants and animals • linking woodlands • will allow animals to move into new areas • planting many new species of trees • will provide food and shelter for new species of insects/birds • could extend the scheme • to reintroduce species of plants or animals which no longer live in that area • could protect wildlife in the area • by legislation or community projects	
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