NAME: ..... DATE: .....

CLASS: ..... MARKS 10

Air and The Respiratory System

1. John drew a table on living things as shown below.

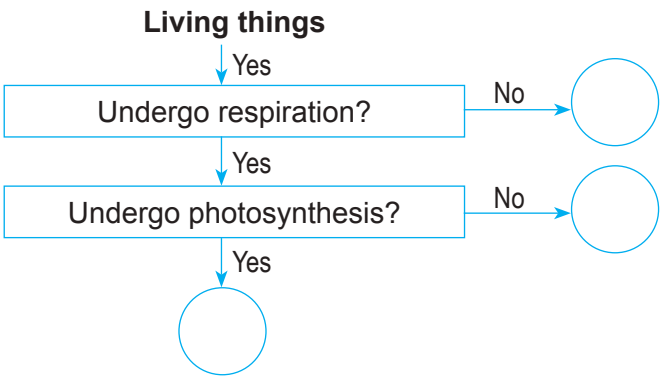
Living thing	Undergo photosynthesis	Undergo respiration
X	✓	✓
Y	×	✓

(a) Suggest a possible identity for X and Y. [2m]

X: _____

Y: _____

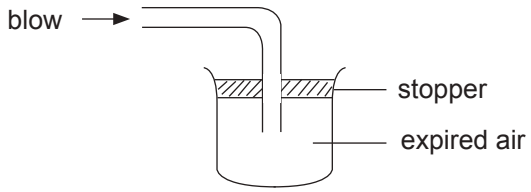
Mary drew her version of a flow chart on living things.



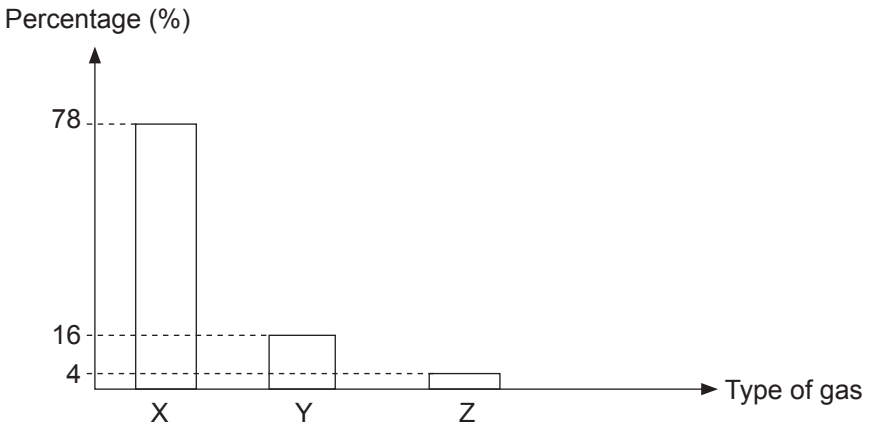
(b) In Mary's flow chart, write 'B' for balsam plant and 'T' for toadstool in the correct circles. [2m]

(c) In one sentence, give the key difference between photosynthesis and respiration as shown in the table and flow chart. [2m]

2. Robert blew air into the sealed container shown below.



The expired air was then tested to determine its constituents and their relative quantities. The results were plotted in the graph below.



(a) Suggest the identity of gases X, Y and Z. [1m]

X: _____

Y: _____

Z: _____

(b) Why does the total percentage of gases not add up to 100%? [1m]

_____

_____

(c) Mindy tested a sample of atmospheric air. How will Mindy's results differ from Robert's? [2m]

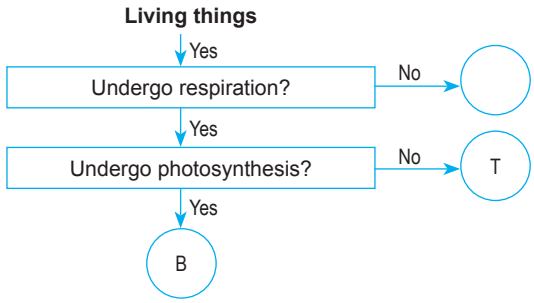
_____

_____

Answers to Air and The Respiratory System

1. (a) X: rose plant (or any green plant)
   Y: human (any animal or fungi)

   (b)



   (c) All living things undergo respiration but only green plants undergo photosynthesis.

2. (a) X: nitrogen
   Y: oxygen
   Z: carbon dioxide

   (b) There are other constituents of air such as water vapour and other gases which have not yet been accounted for.

   (c) Atmospheric air will contain a higher percentage of oxygen (21%) and a lower percentage of carbon dioxide (0.03%).