

**Biology**  
Unit: 4BI1  
Science (Double Award) 4SD0  
Paper: 1B

**Diagram Booklet**

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

**INSTRUCTIONS**

There may be spare copies of some diagrams in case you need them.

**THIS DIAGRAM BOOKLET *MUST* BE RETURNED WITH THE  
QUESTION PAPER AT THE END OF THE EXAMINATION.**

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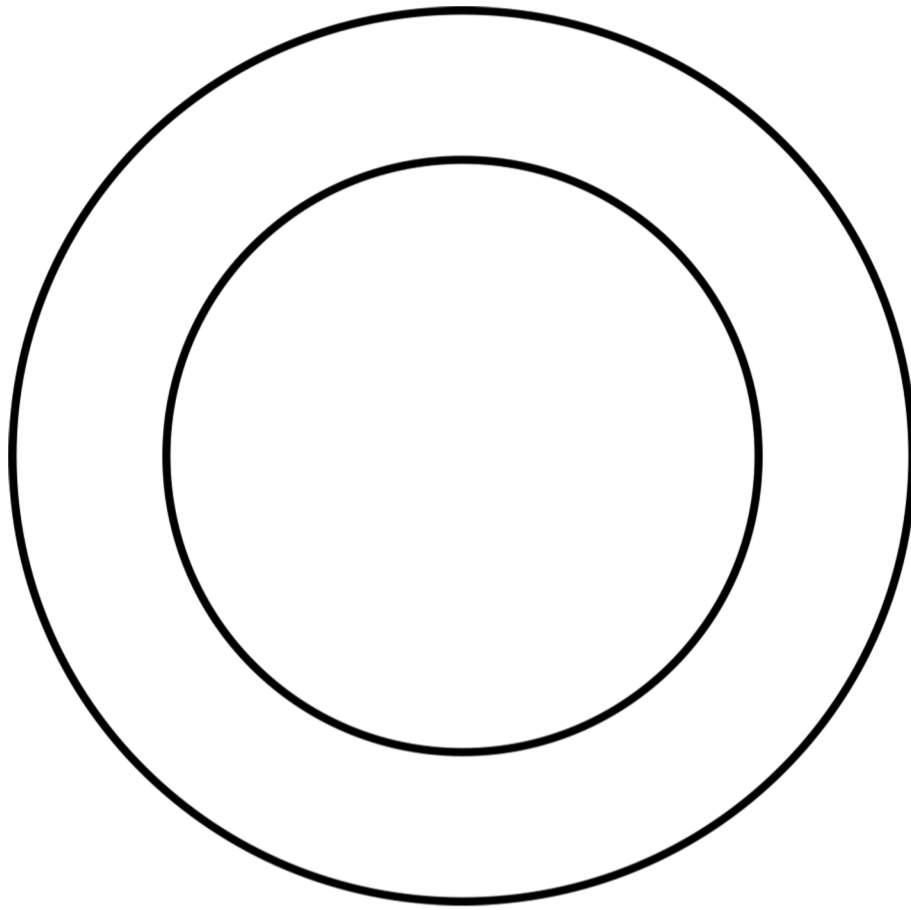
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Question 1(a)

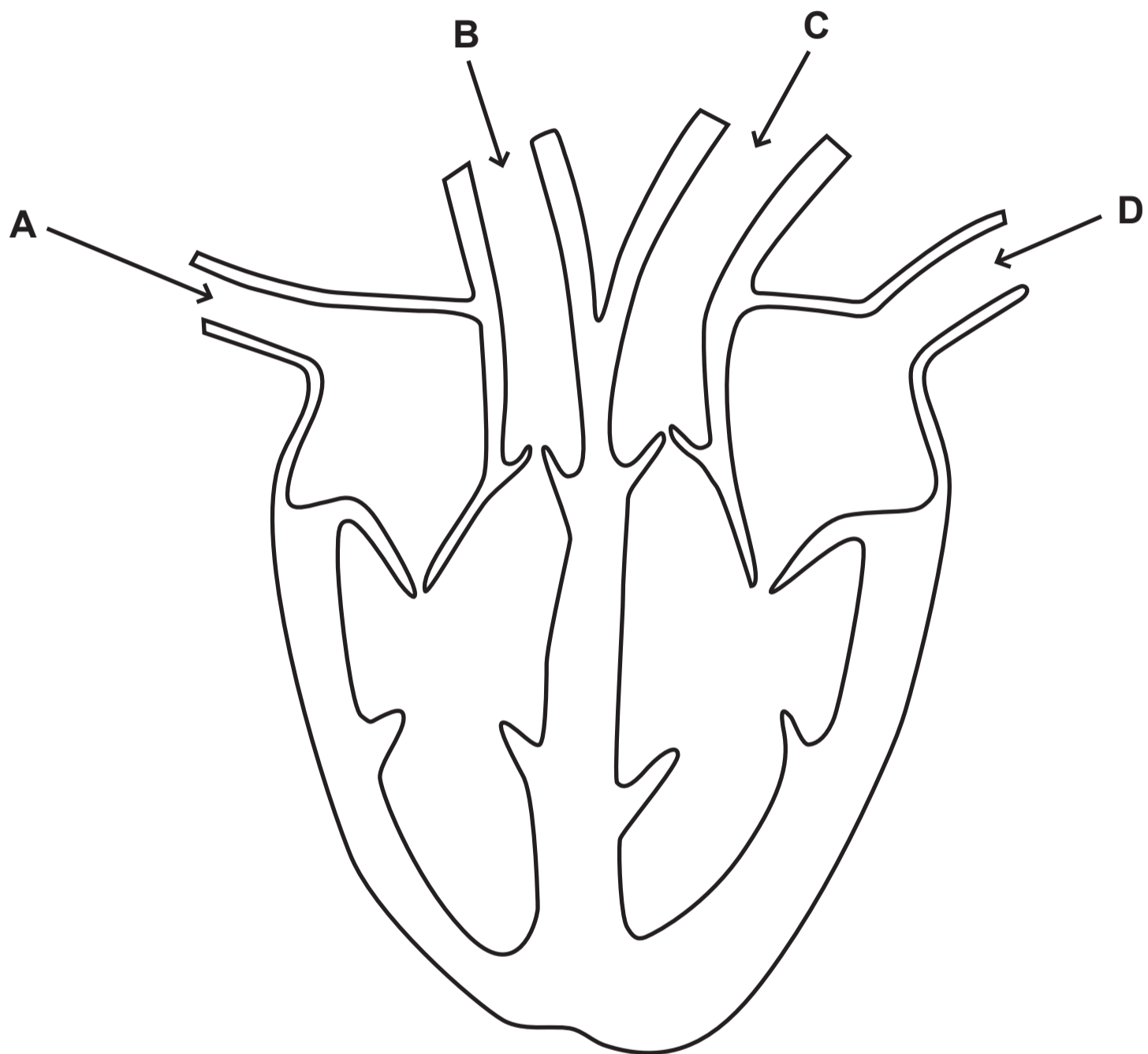
Value	Apparatus
magnification of a red blood cell	microscope
heat produced by germinating seeds	
surface area to volume ratio of a potato cylinder	
breathing rate of a human	
volume of gas produced by yeast in anaerobic respiration	

Question 1(a) (Spare copy)

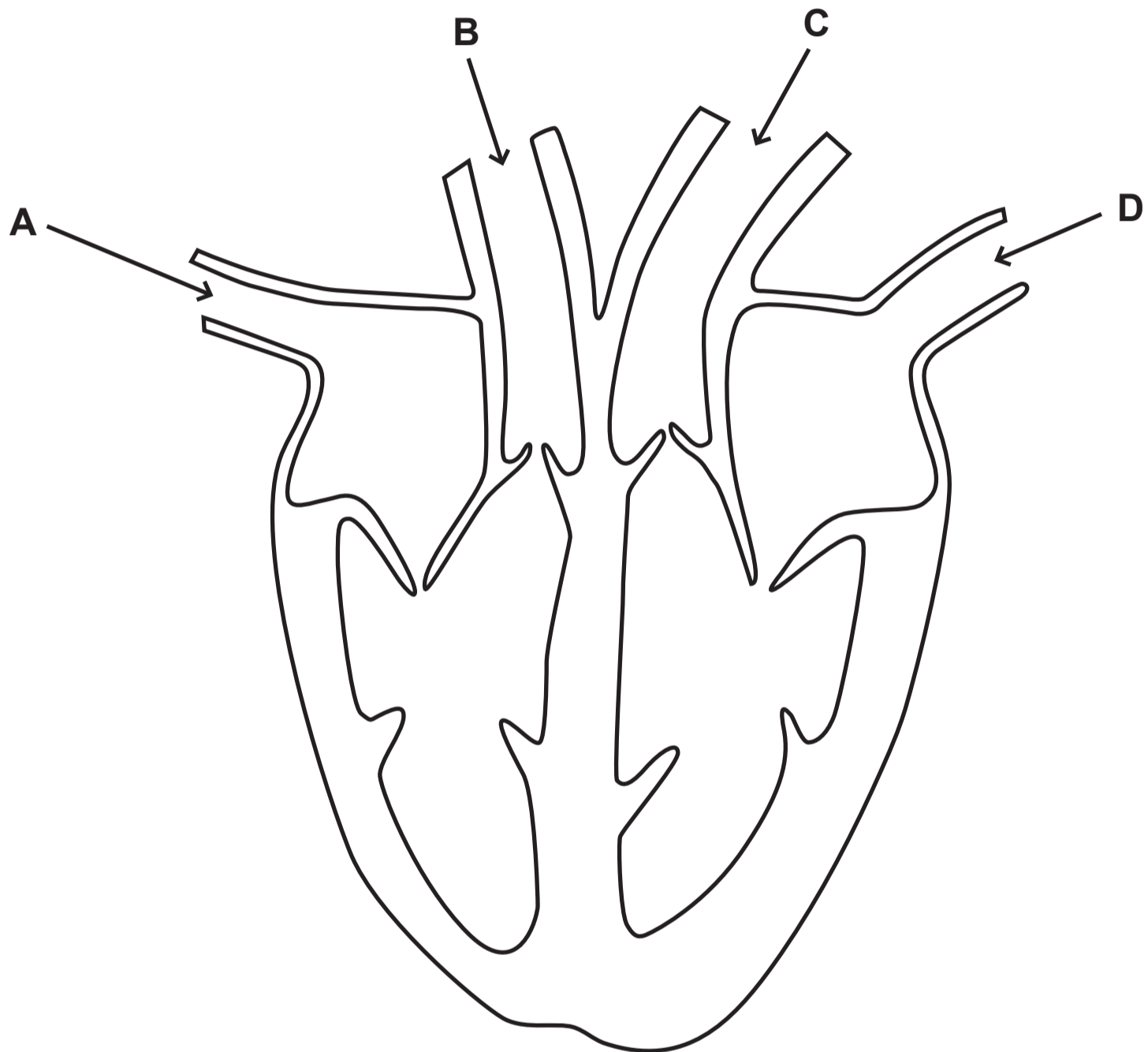
Value	Apparatus
magnification of a red blood cell	microscope
heat produced by germinating seeds	
surface area to volume ratio of a potato cylinder	
breathing rate of a human	
volume of gas produced by yeast in anaerobic respiration	

**Question 1(b)**

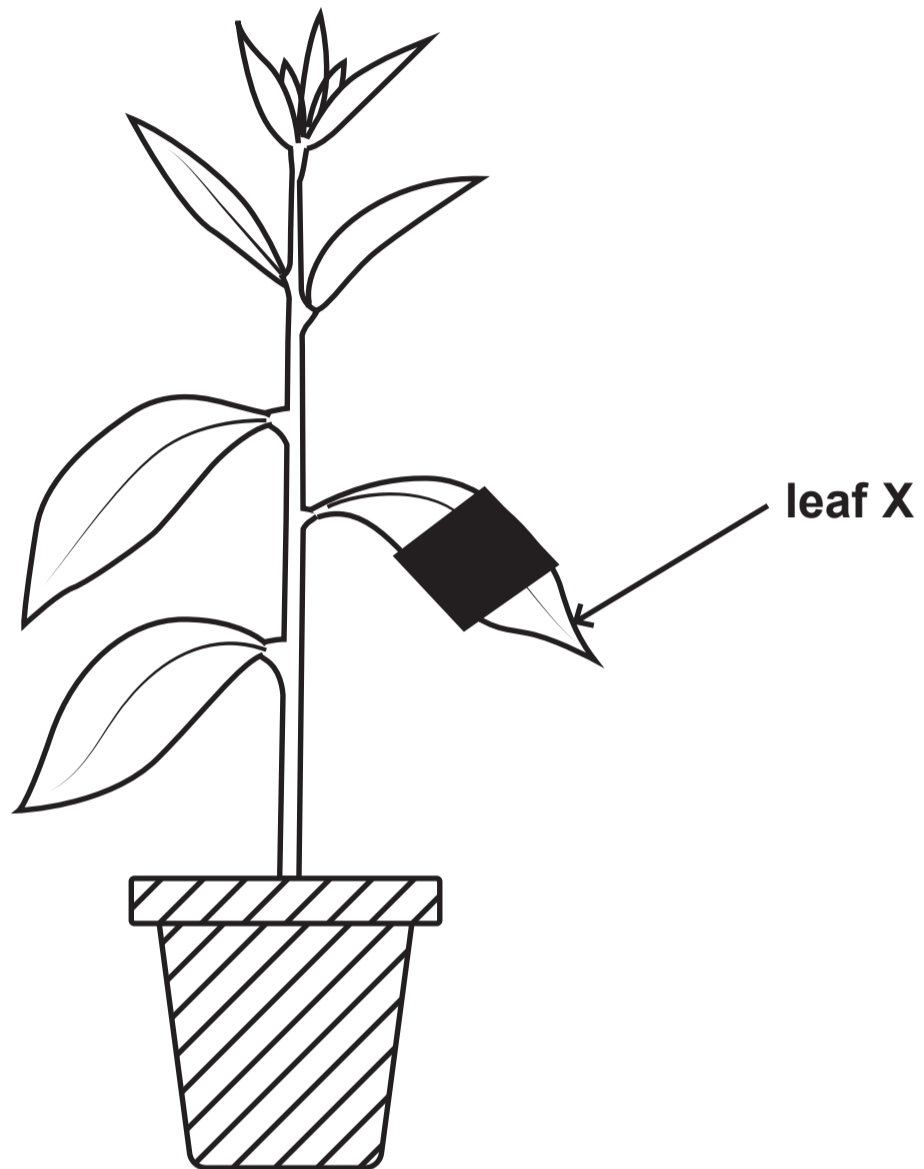
## Question 2



## Question 2 (Spare copy)



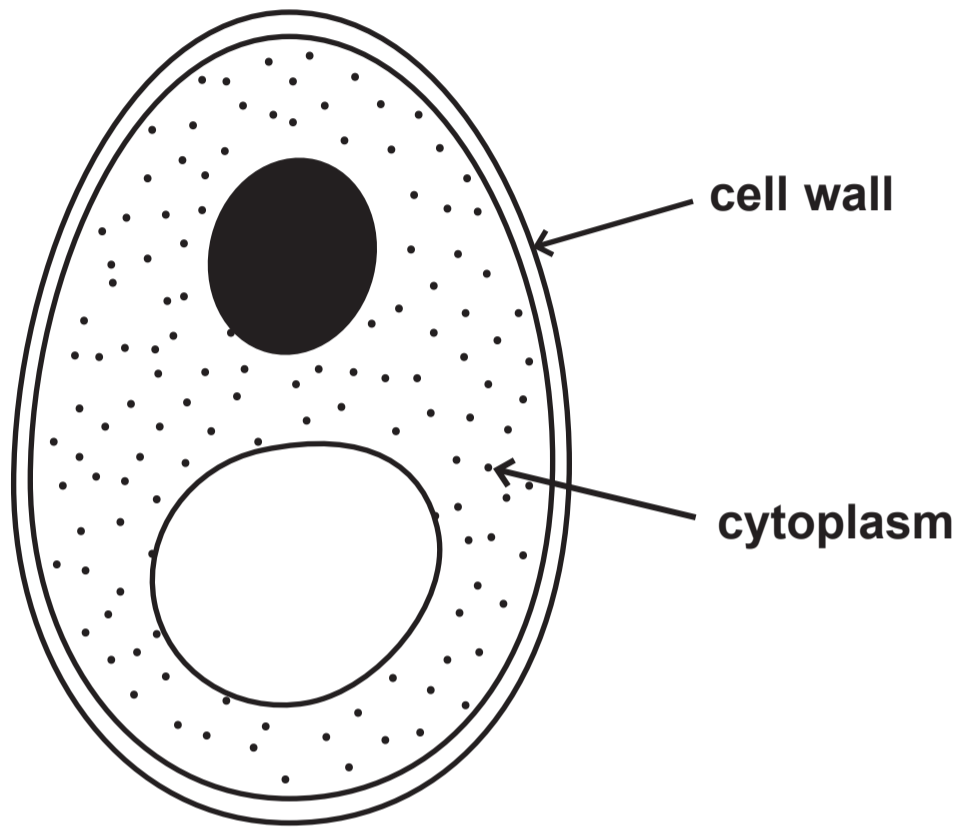
## Question 3(a)



Question 3(b)

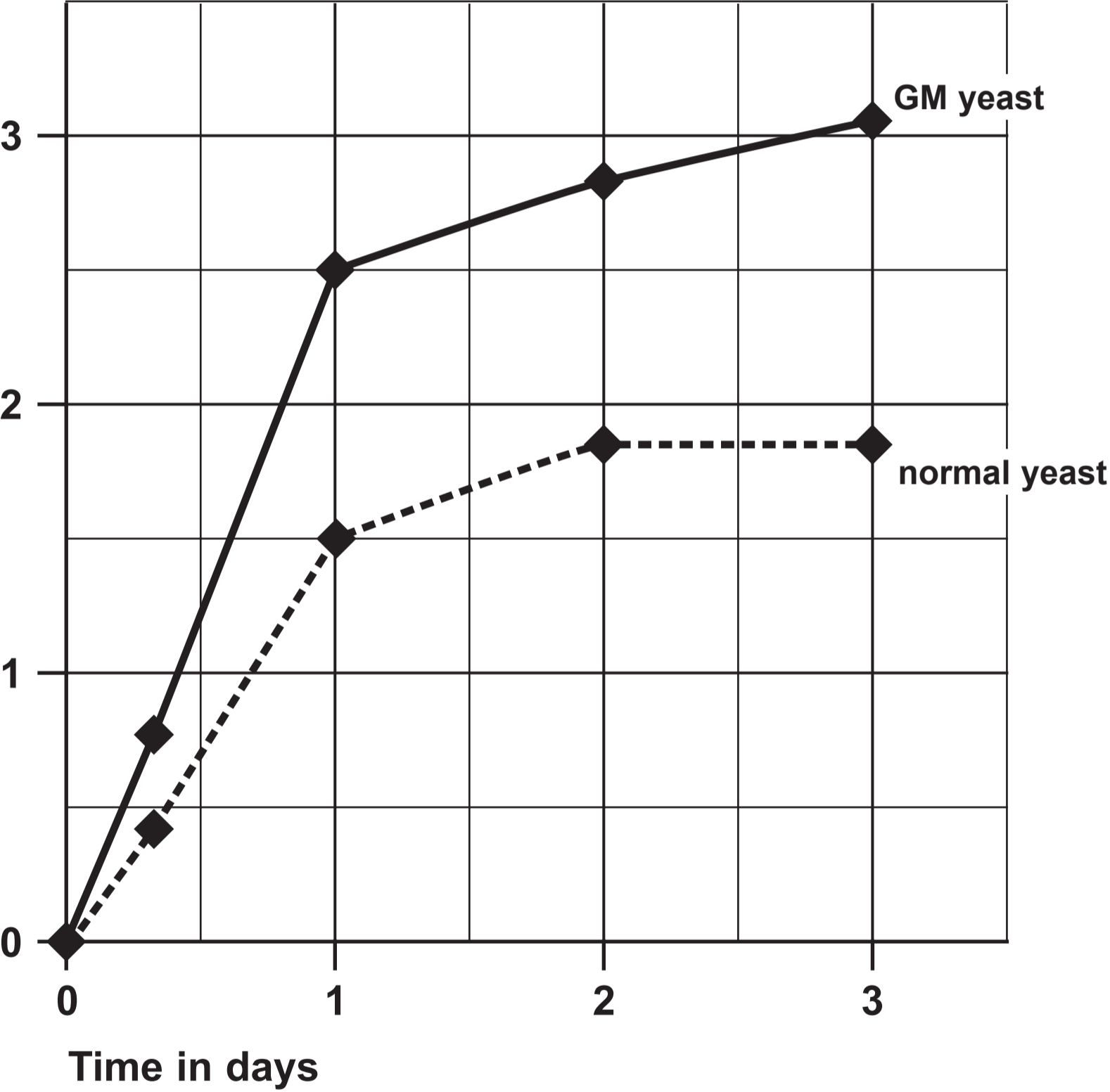
Carbon dioxide concentration in arbitrary units	Rate of photosynthesis in bubbles per minute	
	low light intensity	high light intensity
0·00	0	0
0·02	20	20
0·04	29	35
0·06	35	47
0·08	39	68
0·10	42	84
0·12	45	89
0·14	46	90
0·16	46	90
0·18	46	90

## Question 4(a)



Question 4(c)

Mass of ethanol  
produced in g



Question 5

Month	Mean number of weeds per m <sup>2</sup>	
	chemical control	biological control
February	2	12
March	16	8
April	3	4
May	20	3
June	3	4
July	18	3
August	2	3

Question 6(b)

Trophic level	Number of individuals per m <sup>2</sup>	Total biomass in g per m <sup>2</sup>
secondary consumers	100	1·0
primary consumers	$1·5 \times 10^4$	2·5
producers	$7·2 \times 10^{10}$	17·5





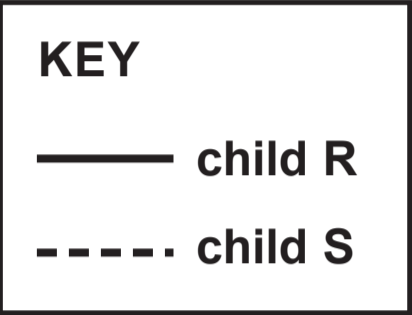
Question 7(a)

Individual	Genotype
P	
Q	
R	Dd
S	

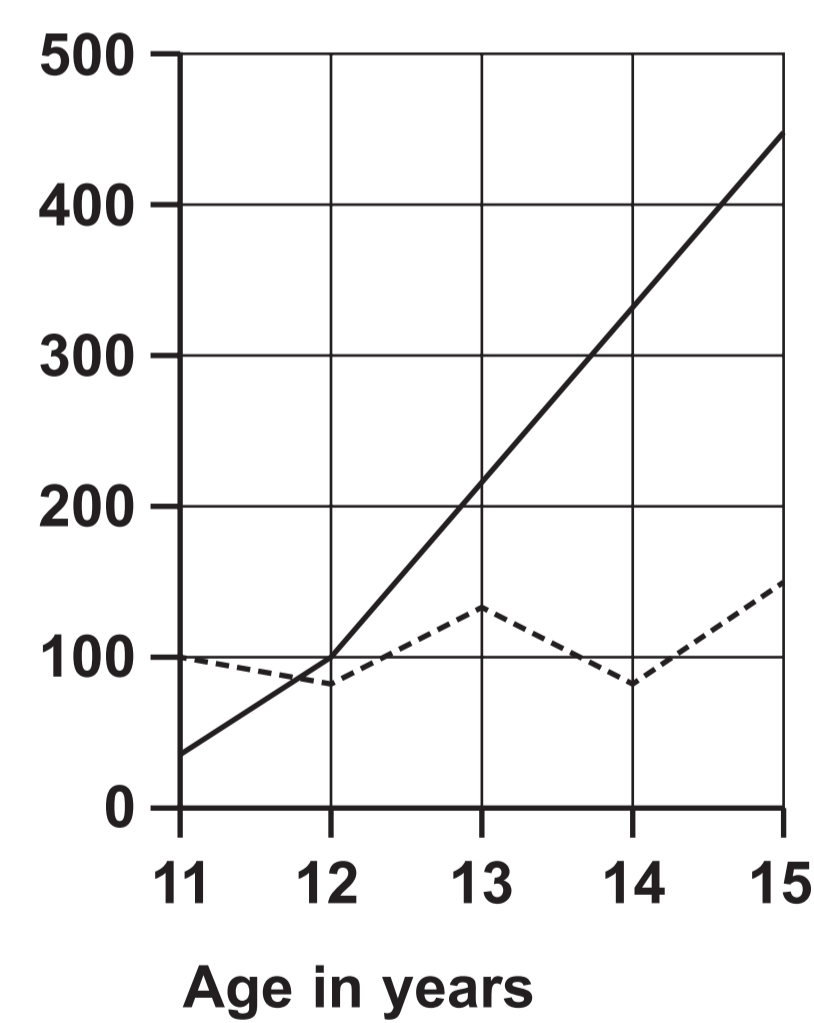
Question 7(a) (Spare copy)

Individual	Genotype
P	
Q	
R	Dd
S	

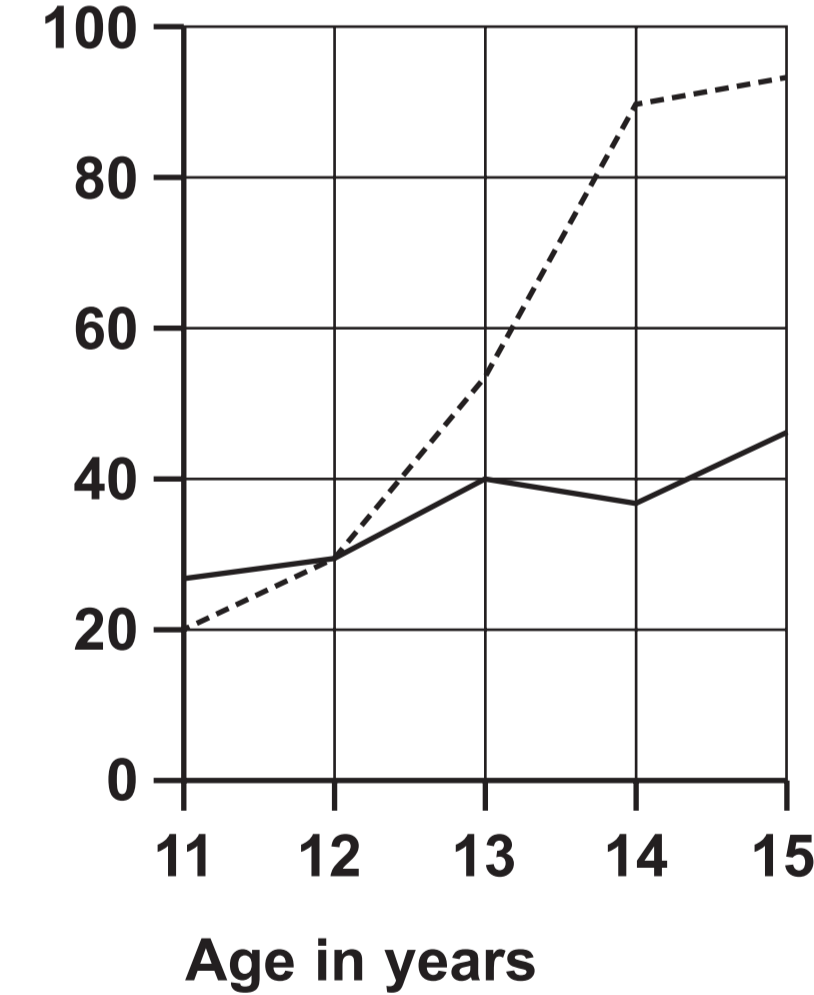
Question 7(c)



Concentration of testosterone in arbitrary units



Concentration of oestrogen in arbitrary units



Question 8

Substance	Percentage by mass (%)	
	Breast milk	Cow's milk
water	87·0	88·0
vitamins	trace	trace
fat	3·8	5·0
carbohydrate	7·9	3·0
minerals	0·2	0·7
protein	1·0	3·3

**Question 9(a)(i)**

[illegible]

**Question 9(a)(i) (Spare copy)**

[illegible]

## Question 10(c)

