

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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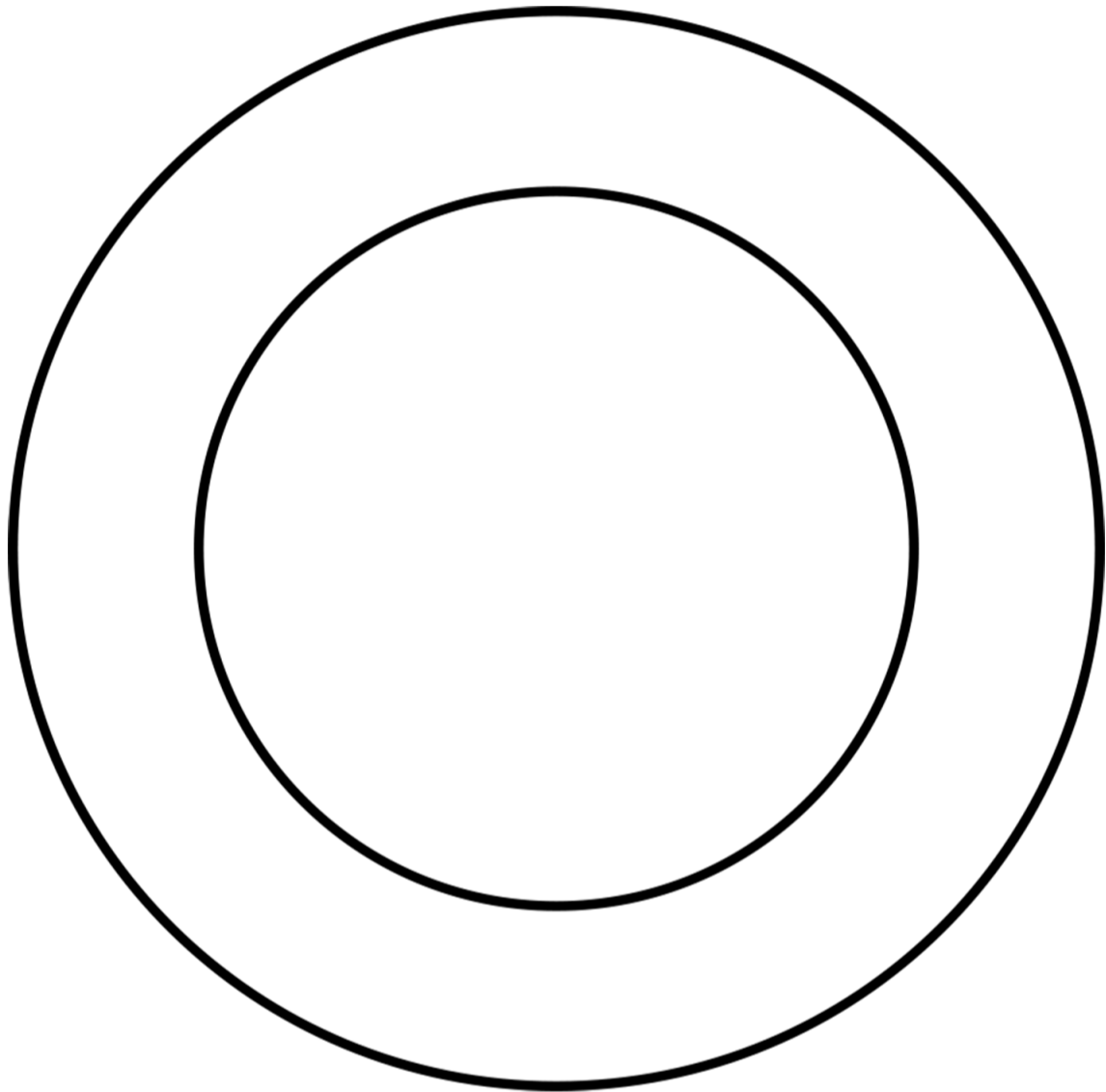
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Question 1(a)

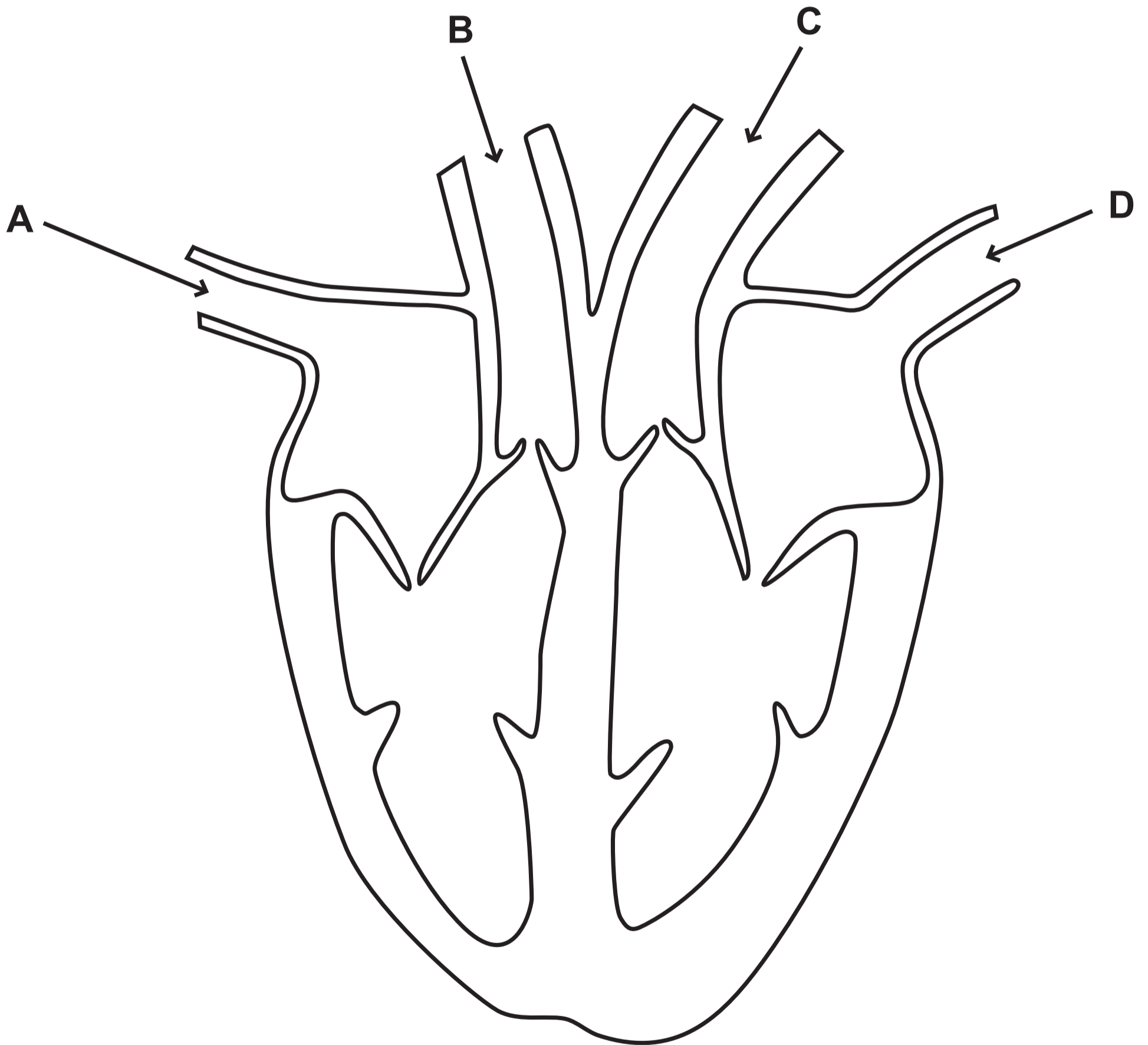
Value	Apparatus
magnification of a red blood cell	microscope
heat produced by germinating seeds	
surface area to volume ratio of a potato cylinder	
breathing rate of a human	
volume of gas produced by yeast in anaerobic respiration	

Question 1(a) (Spare copy)

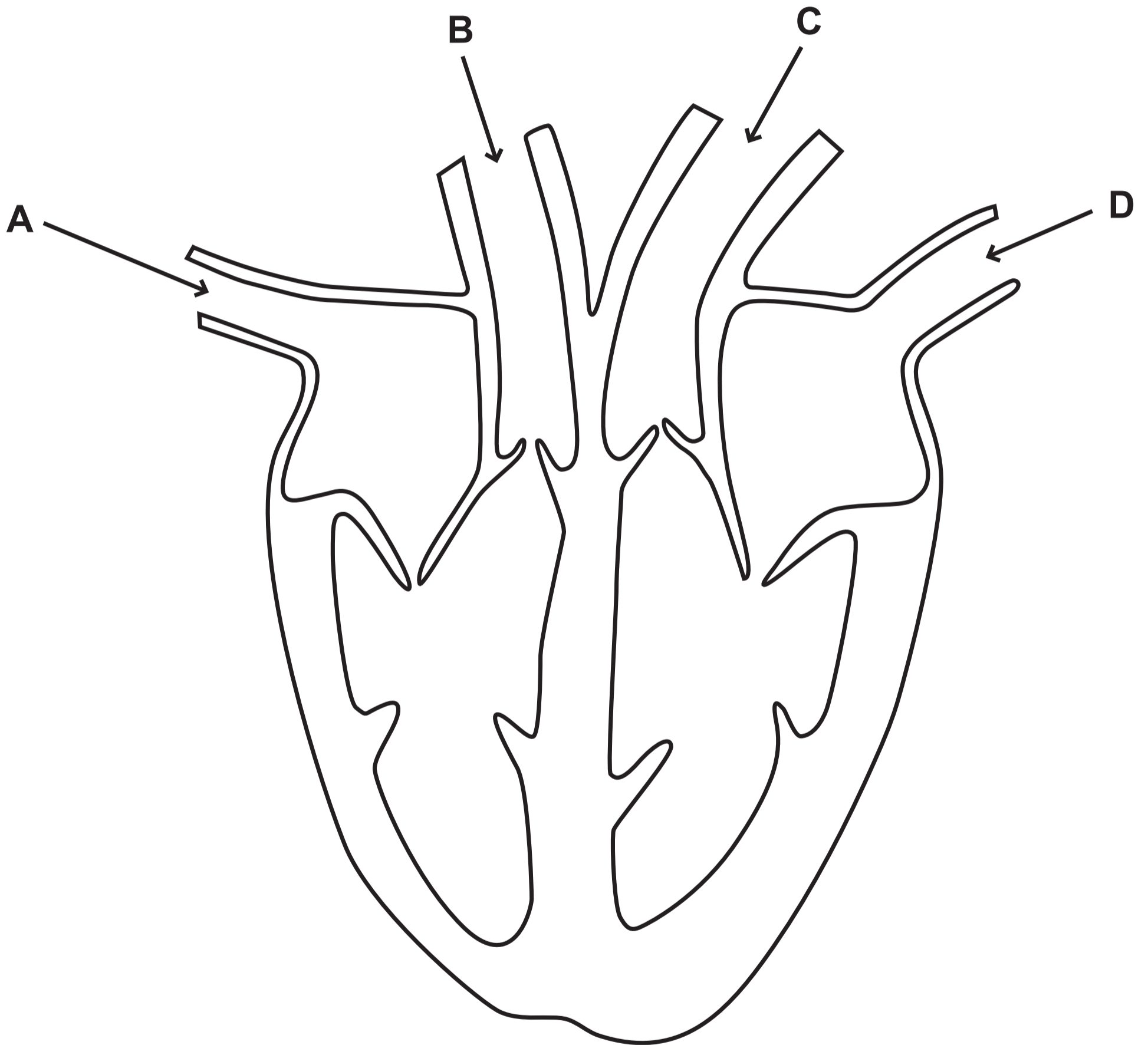
Value	Apparatus
magnification of a red blood cell	microscope
heat produced by germinating seeds	
surface area to volume ratio of a potato cylinder	
breathing rate of a human	
volume of gas produced by yeast in anaerobic respiration	

Question 1(b)

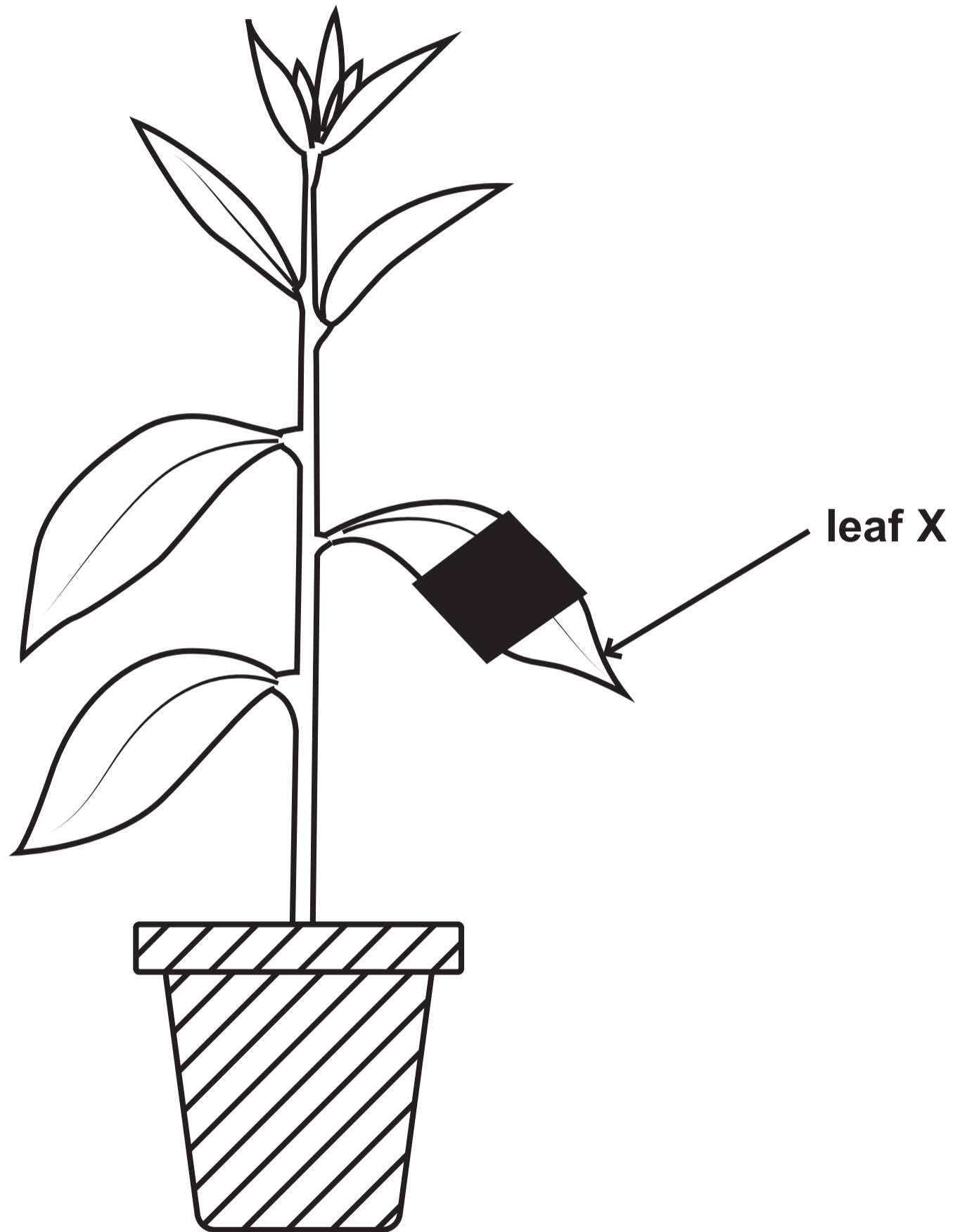
Question 2



Question 2 (Spare copy)



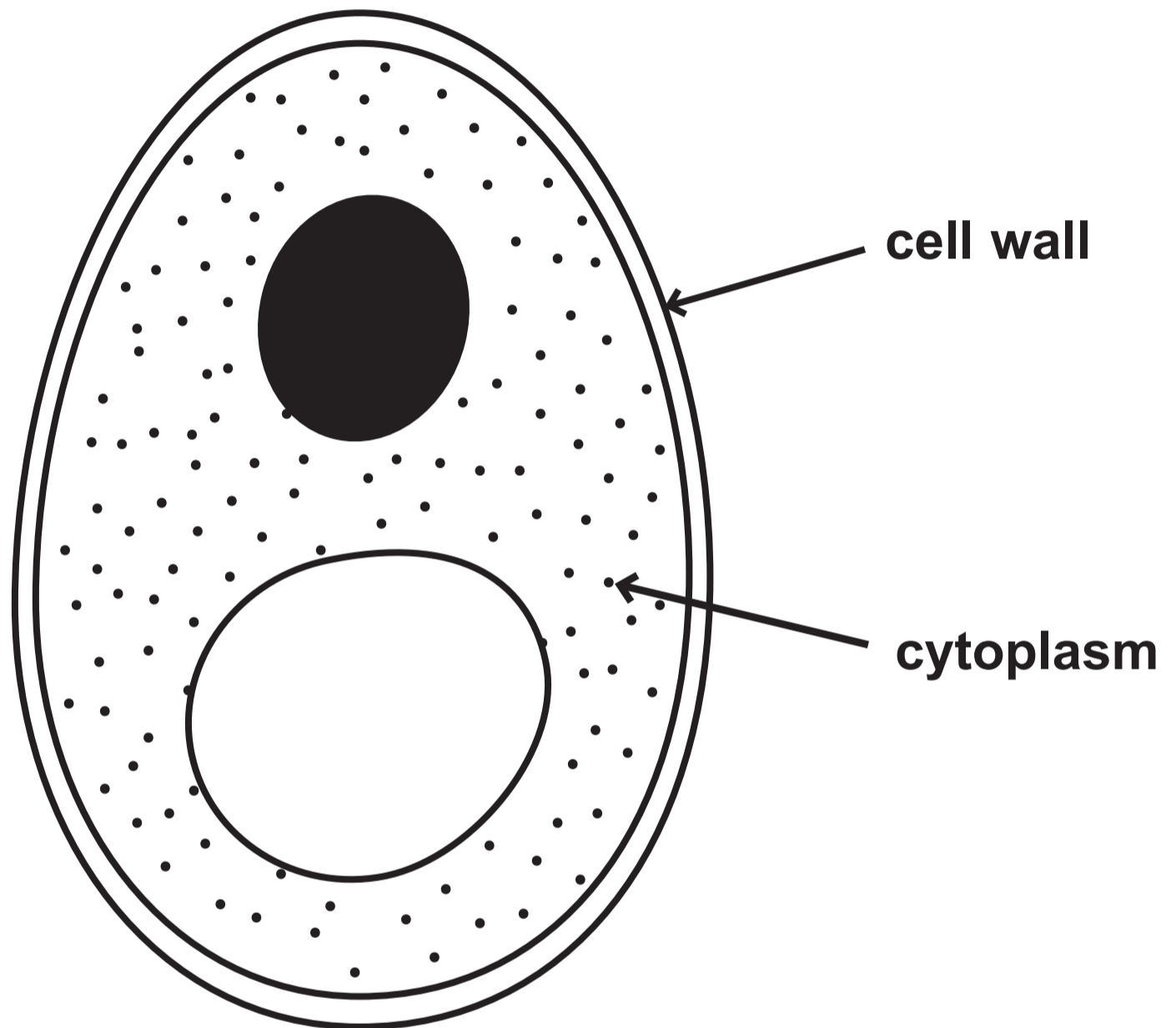
Question 3(a)



Question 3(b)

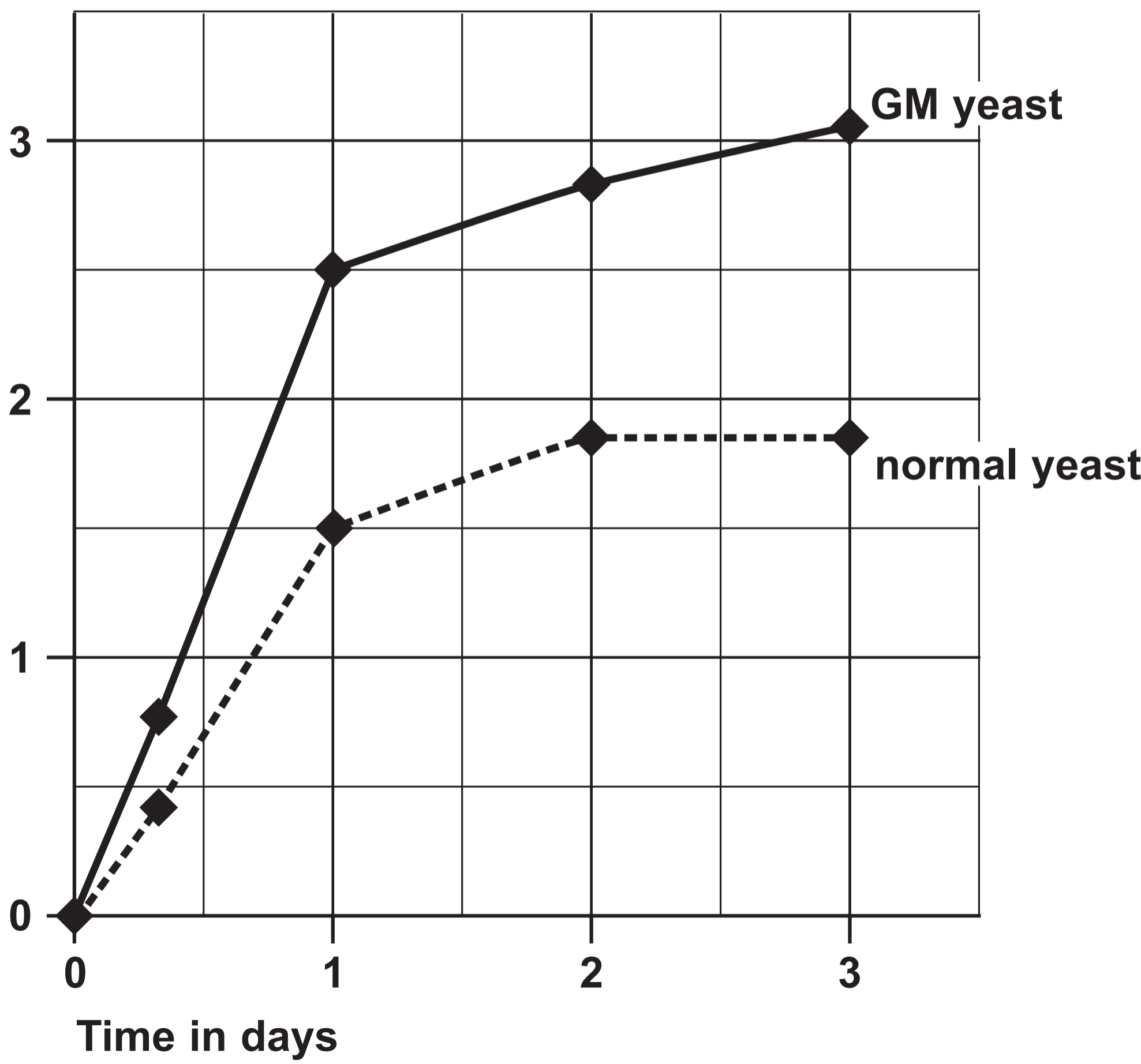
Carbon dioxide concentration in arbitrary units	Rate of photosynthesis in bubbles per minute	
	low light intensity	high light intensity
0·00	0	0
0·02	20	20
0·04	29	35
0·06	35	47
0·08	39	68
0·10	42	84
0·12	45	89
0·14	46	90
0·16	46	90
0·18	46	90

Question 4(a)



Question 4(c)

Mass of ethanol produced in g



Question 5

Month	Mean number of weeds per m ²	
	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 m²	Total biomass in g per m²
secondary consumers	100	1·0
primary consumers	1·5 × 10⁴	2·5
producers	7·2 × 10¹⁰	17·5

Question 6(b)(ii)

[illegible]

Question 6(b)(ii) (Spare copy)

[illegible]

Question 7(a)

Individual	Genotype
P	
Q	
R	Dd
S	

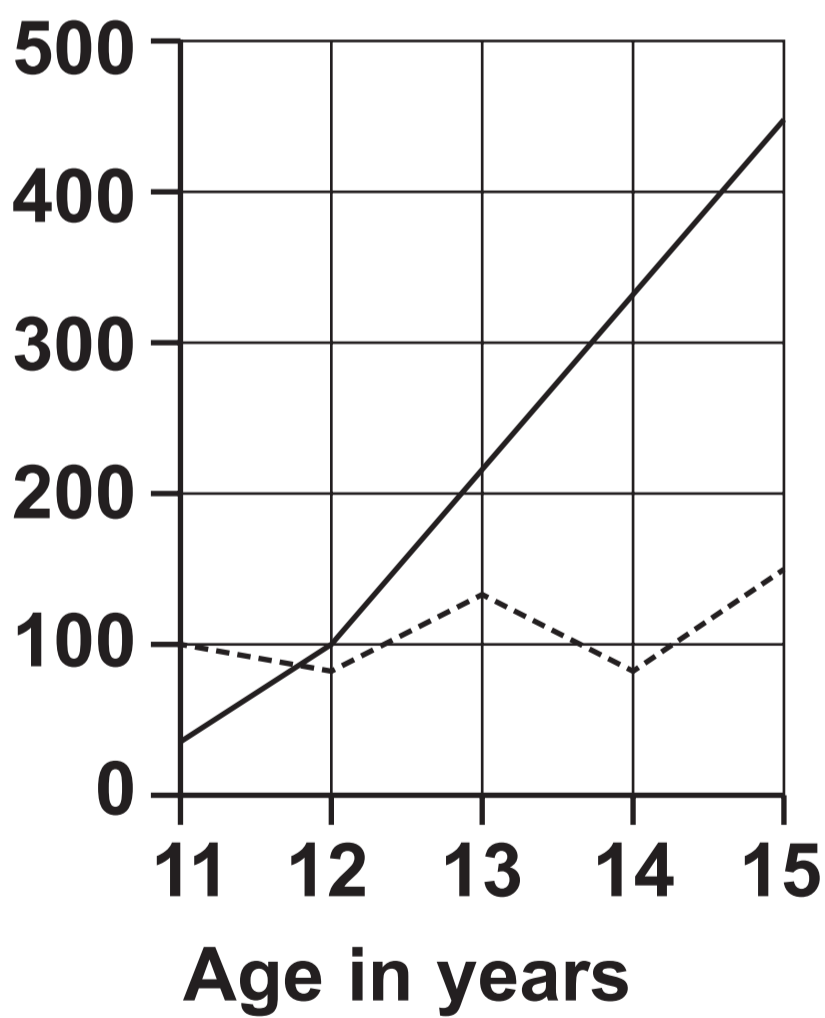
Question 7(a) (Spare copy)

Individual	Genotype
P	
Q	
R	Dd
S	

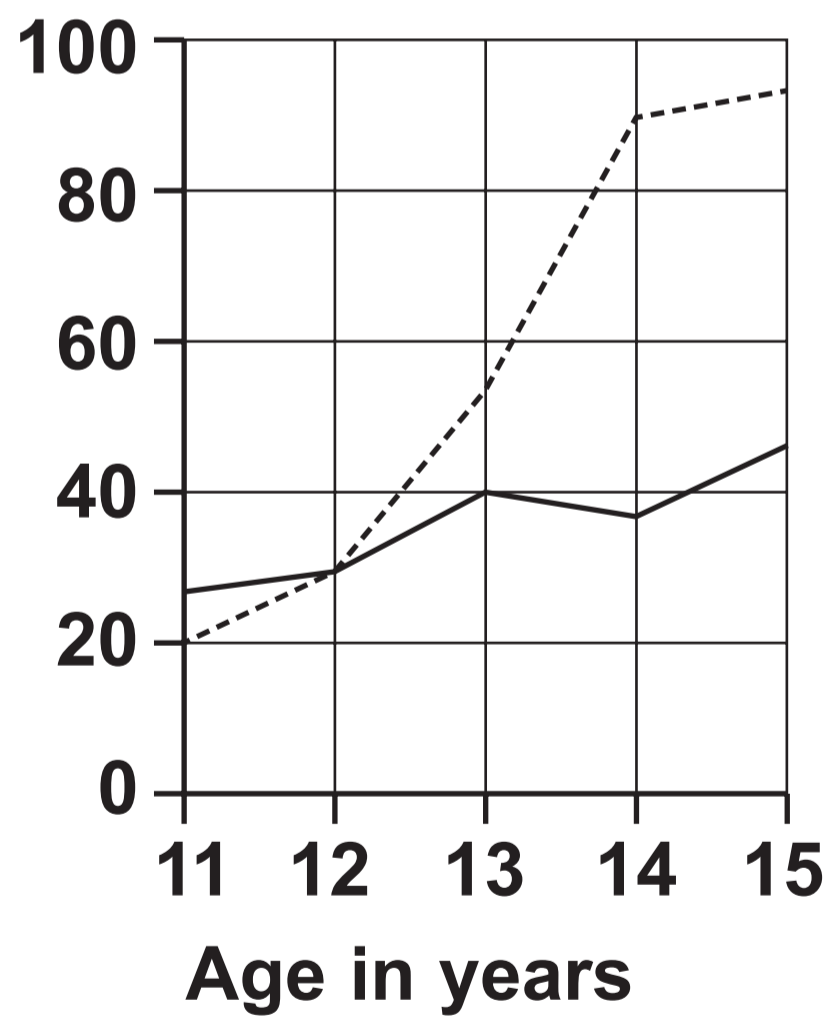
Question 7(c)



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

Cause of death	Number of deaths				
	non-smokers	light smokers	medium smokers	heavy smokers	total
lung cancer	0	12	11	13	36
other cancers	15	35	24	18	92
all deaths	82	345	206	157	790

Question 9(a)(i)

[illegible]

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

[illegible]

Question 10(c)

