

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.

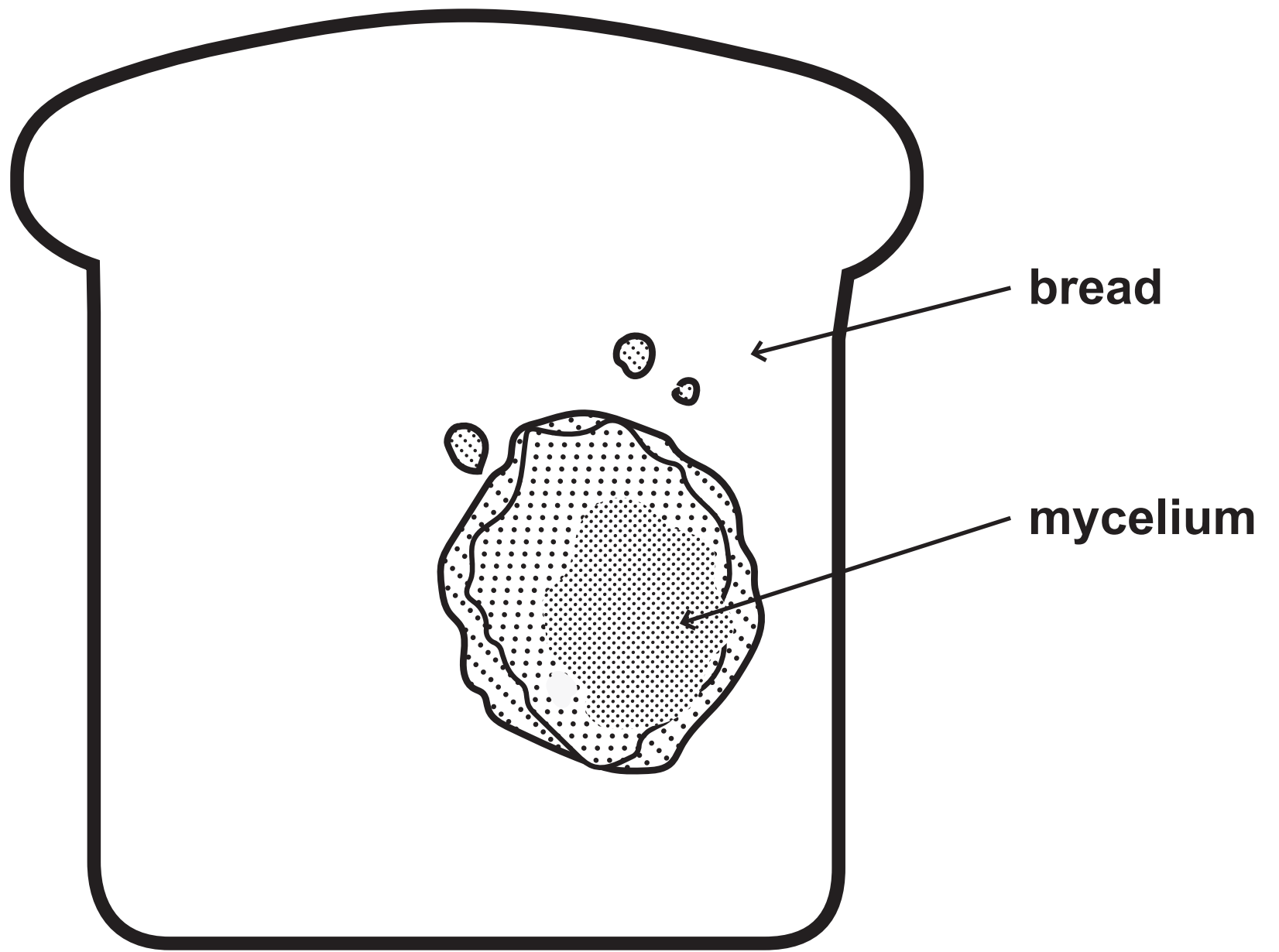
**THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.**

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## Question 1(b)





## Question 2(a)(i)

Type of cell	Number of cells per mm <sup>3</sup>	Number of cells per mm <sup>3</sup> in standard form
red blood cell	5000 000	$5.0 \times 10^6$
white blood cell	6000	

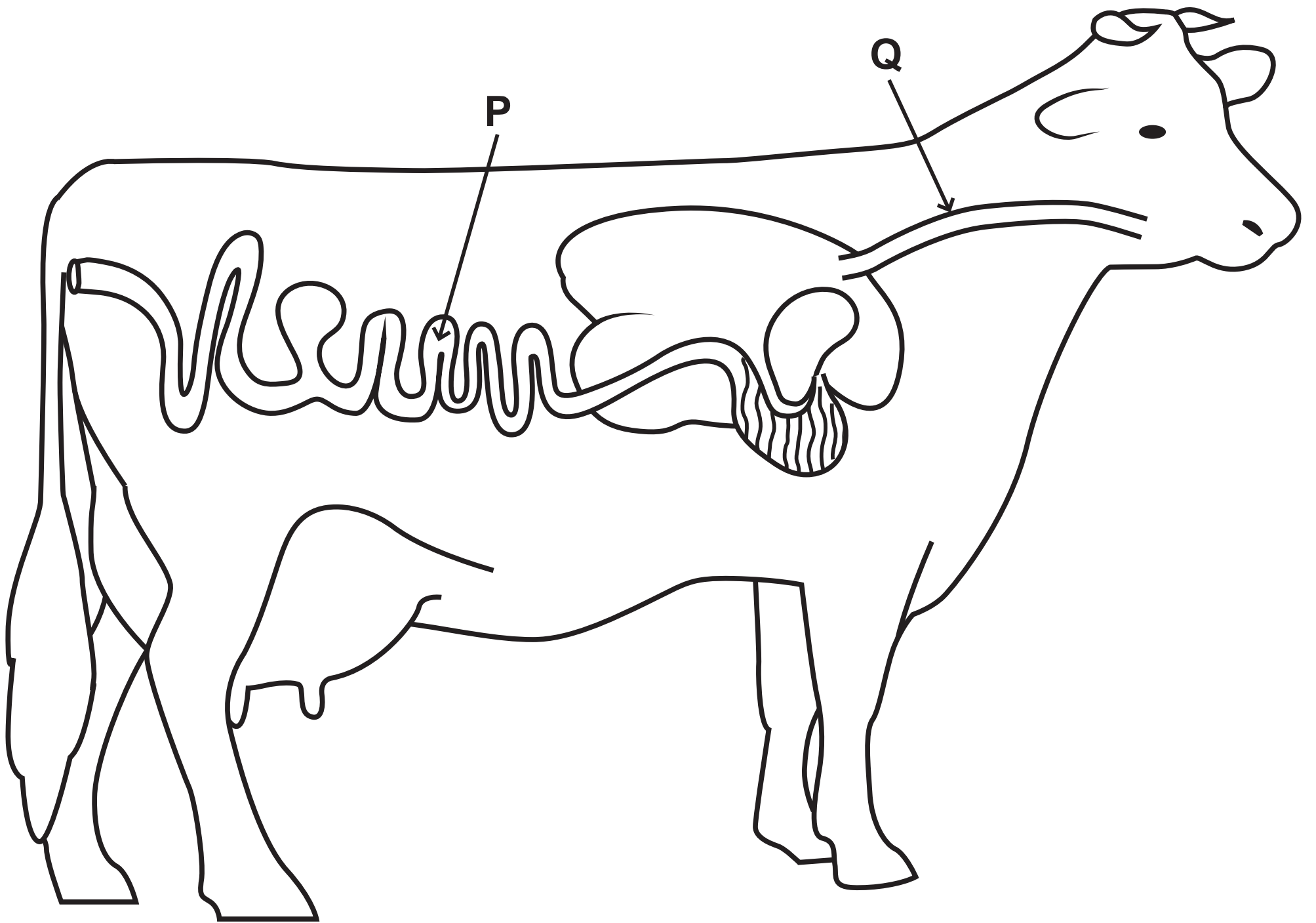
**Question 2(a)(i)**

<b>Type of cell</b>	<b>Number of cells per mm<sup>3</sup></b>	<b>Number of cells per mm<sup>3</sup> in standard form</b>
<b>red blood cell</b>	<b>5000 000</b>	<b><math>5.0 \times 10^6</math></b>
<b>white blood cell</b>	<b>6000</b>	

**Question 2(b)**

<b>Name of condition</b>	<b>Description</b>	<b>Symptom</b>
<b>anaemia</b>	<b>low red blood cell count</b>	<b>often tired</b>
<b>leukopenia</b>	<b>low white blood cell count</b>	<b>likely to get infections</b>

## Question 3



Question 4(a)

Function of vitamin	Vitamin
prevents scurvy	C
improves vision	
helps bone growth	

Question 4(a)

Function of vitamin	Vitamin
prevents scurvy	C
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Question 4(b)

Time in hours	Dry mass of yeast in g	
	with vitamin C	without vitamin C
0	0.50	0.50
30	7.10	6.50

## Question 6(c)(i)

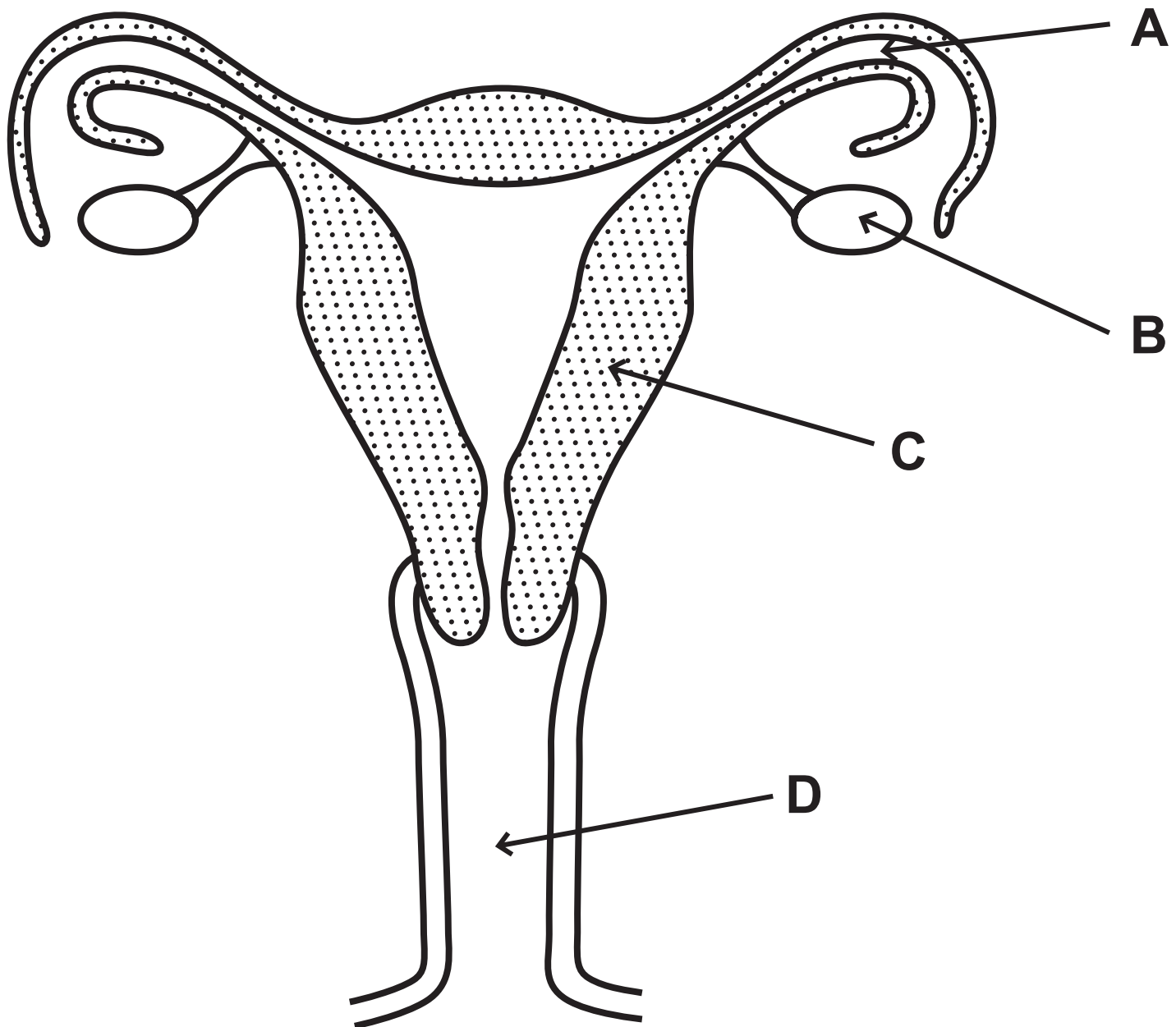
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## Question 6(c)(i)

[illegible]

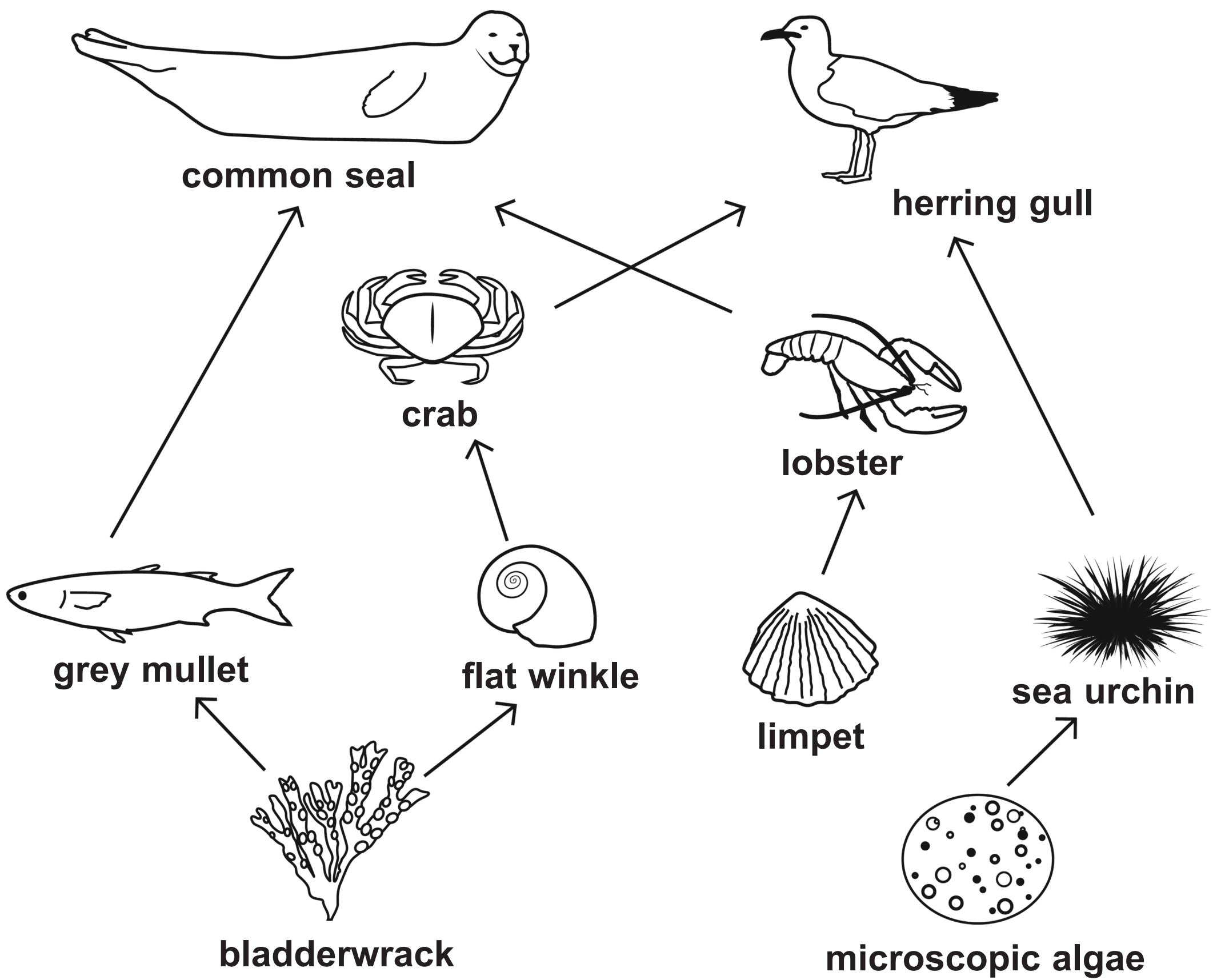
## Question 8(b)



Question 8(c)

In one ejaculation	Age in years						
	16–30	31–33	34–36	37–39	40–43	44–47	48–72
mean semen volume in cm <sup>3</sup>	3·45	3·44	3·35	3·30	3·22	2·92	2·49
mean sperm concentration in millions per cm <sup>3</sup>	61·5	64·2	64·1	61·1	62·1	62·4	56·9
mean number of sperm released in millions	212	221	215	202		182	142

Question 9



## Question 11(a)

