Paper Reference(s) 9BN0/03

Pearson Edexcel Level 3 GCE

Biology A (Salters Nuffield)

Advanced

PAPER 3: General and Practical Applications in Biology

Wednesday 18 June 2025 – Morning

Time: 2 hours

Diagram Booklet

THIS DOCUMENT MUST BE RETURNED TO PEARSON AT THE END OF THE EXAMINATION

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

Surname						
Other names						
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Pearson

INSTRUCTIONS

There may be spare copies of some diagrams.

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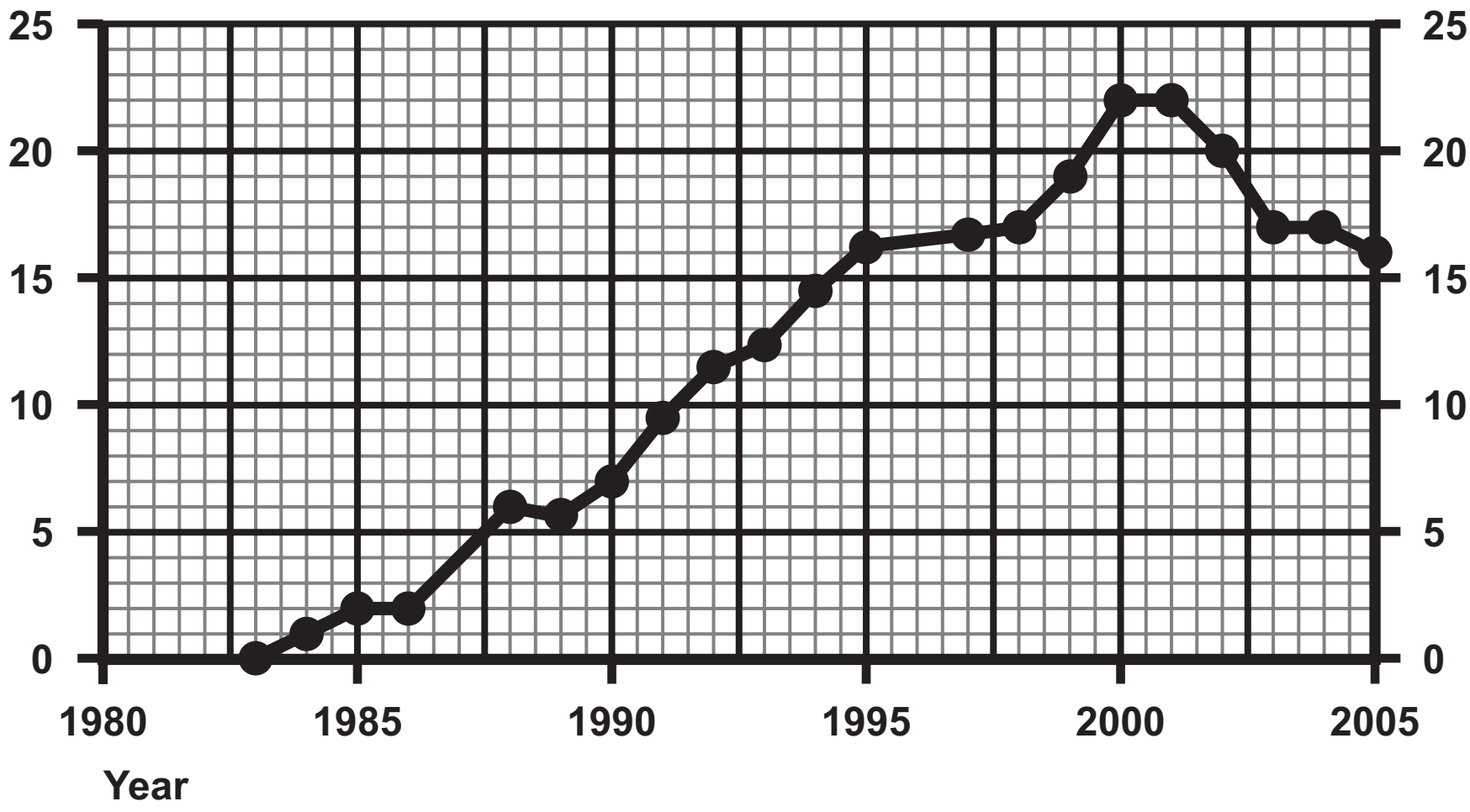
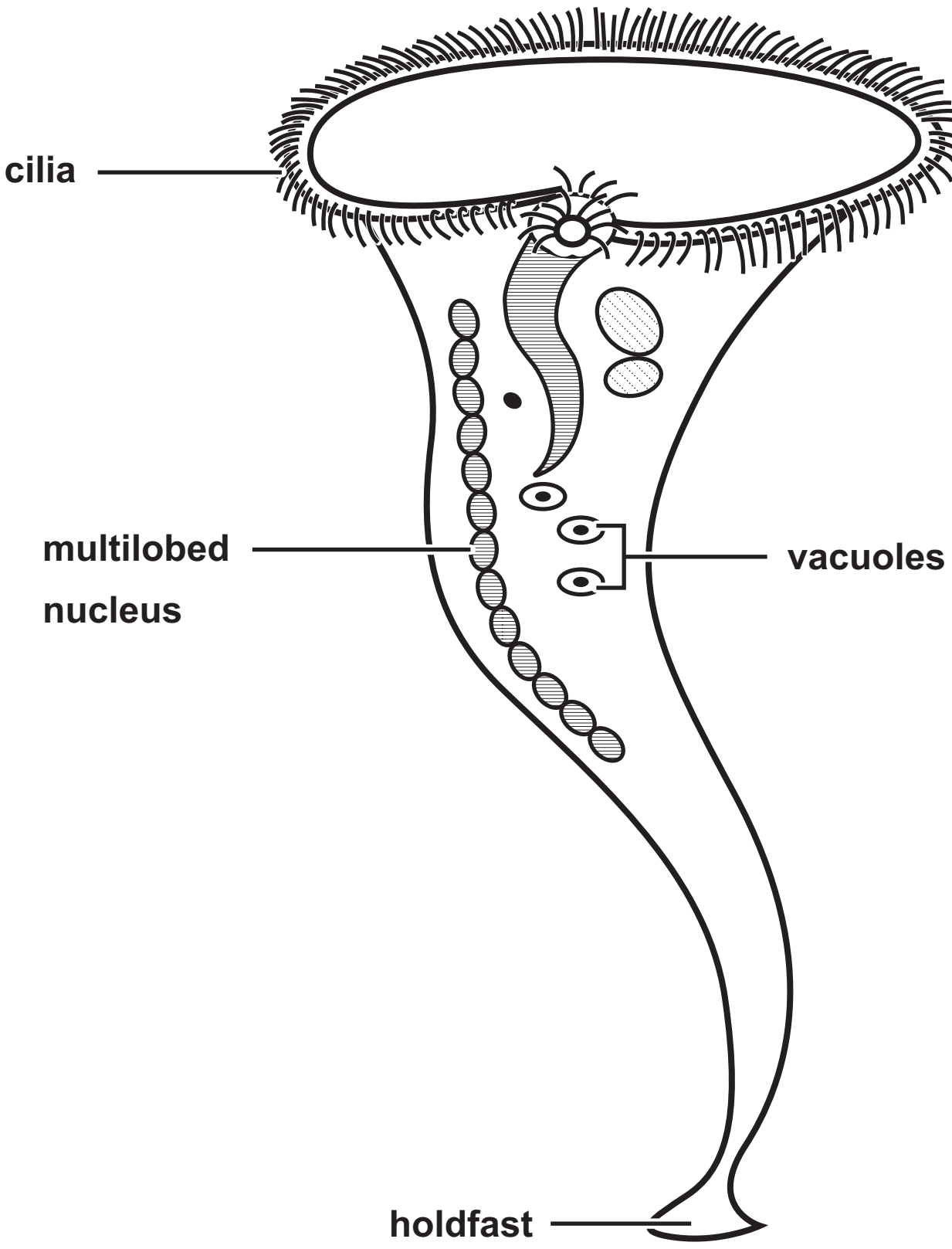
Spare Copies

15 Question 4(a) – Spare copy

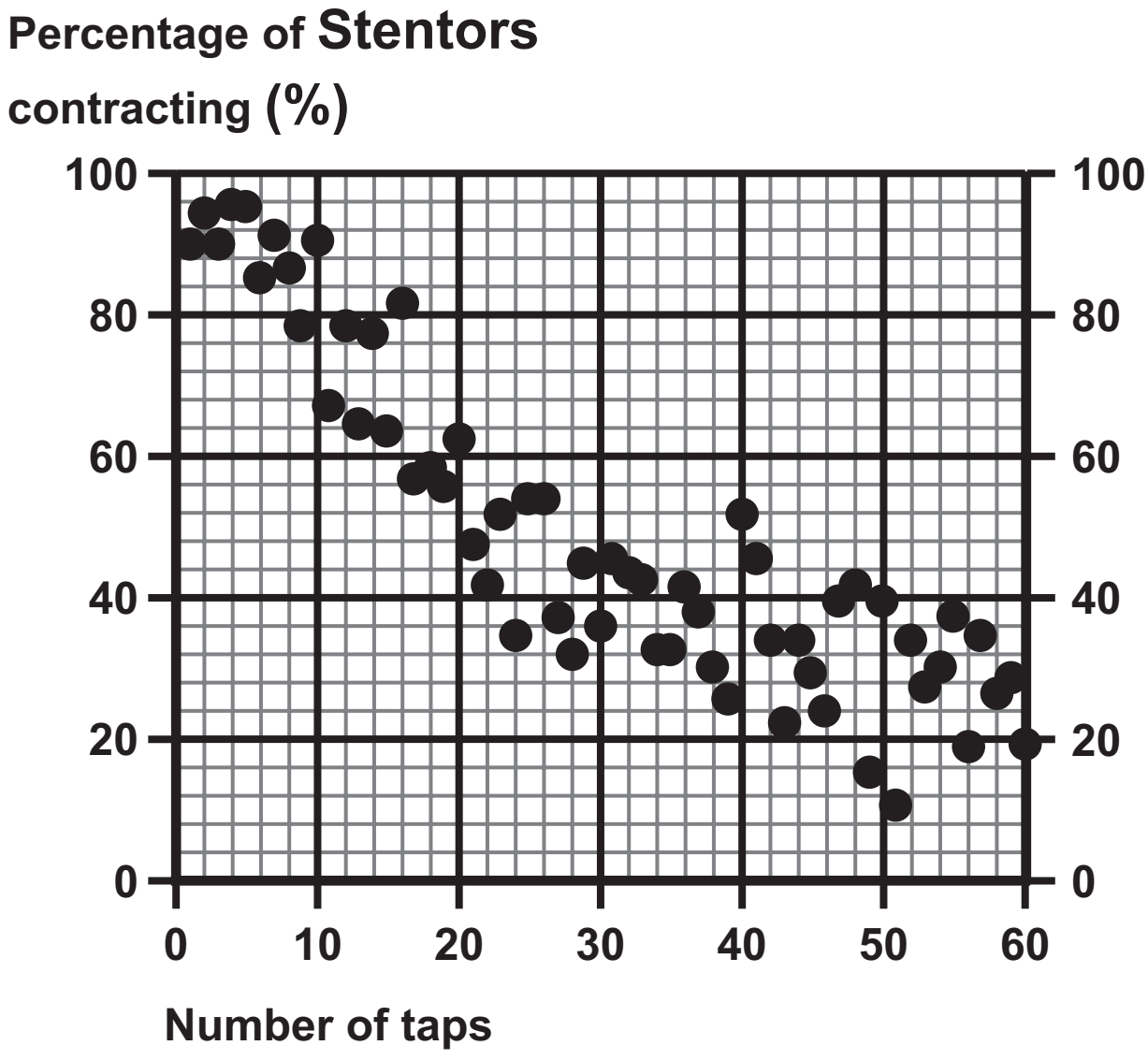
Question 1(a)


Mean species richness
25
20
15
10
5
0
1980
1985
1990
1995
2000
2005
Year

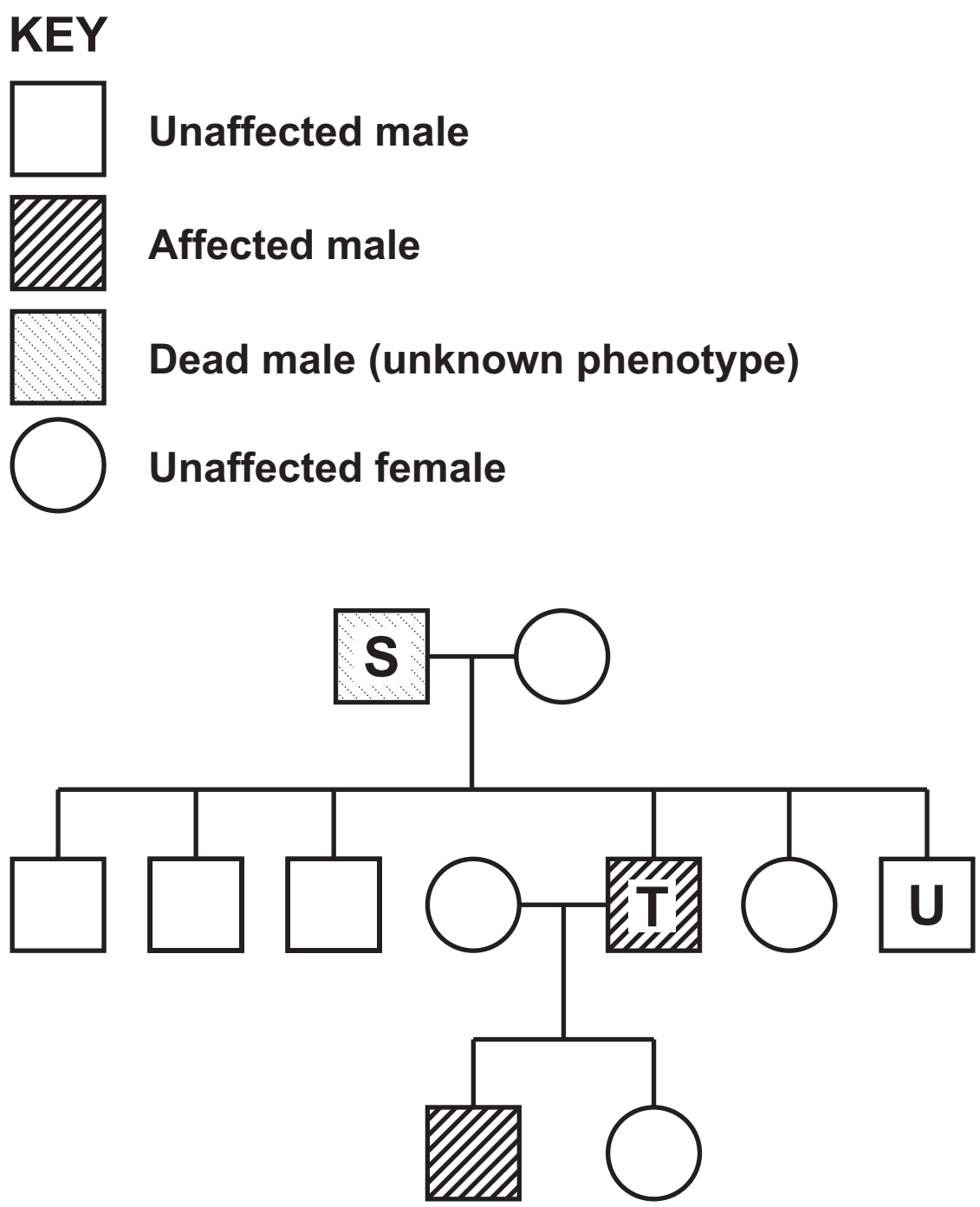
Question 2



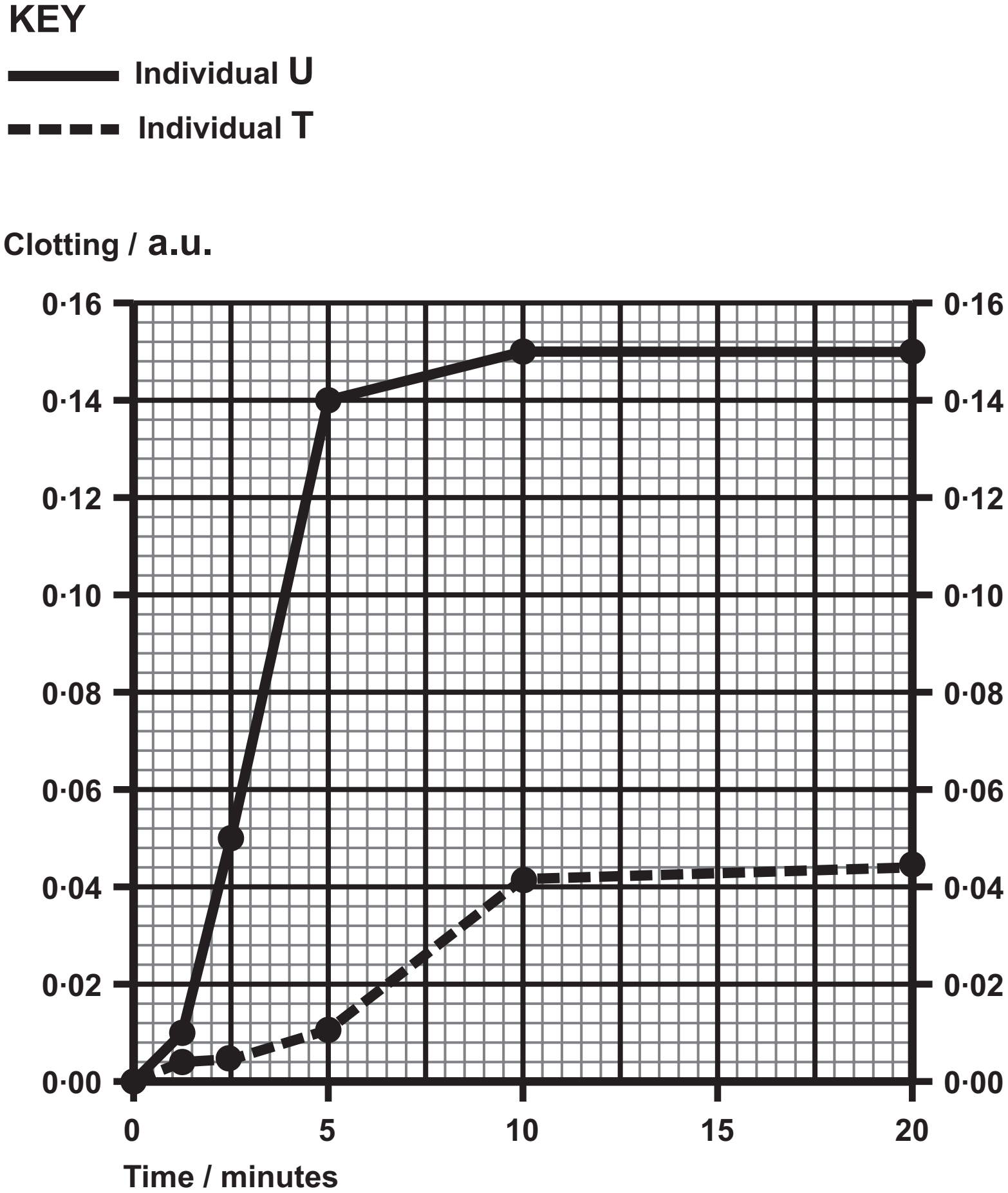
Question 2(b)


Percentage of Stentors contracting (%)
100
80
60
40
20
0
0
10
20
30
40
50
60
Number of taps

Question 3(b)

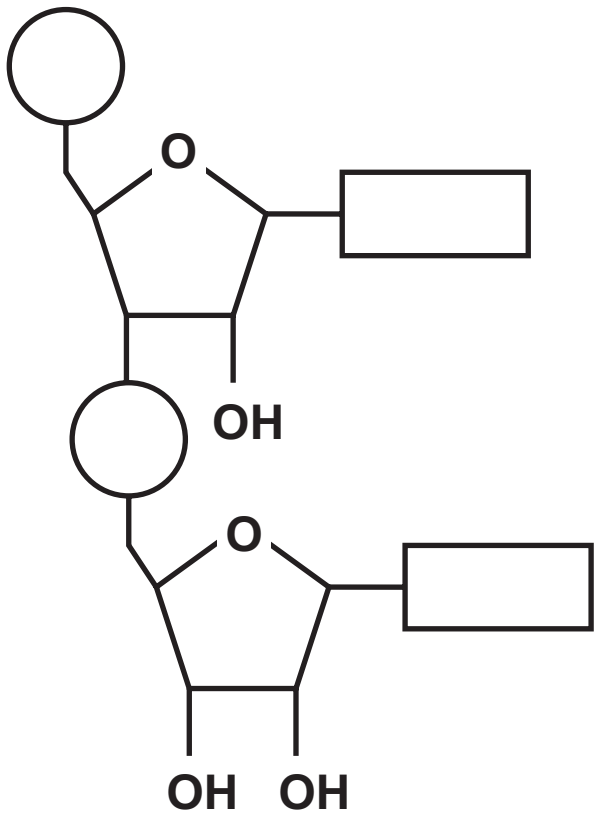

KEY
Unaffected male
Affected male
Dead male (unknown phenotype)
Unaffected female
S
T
U

Question 3(b)(iii)

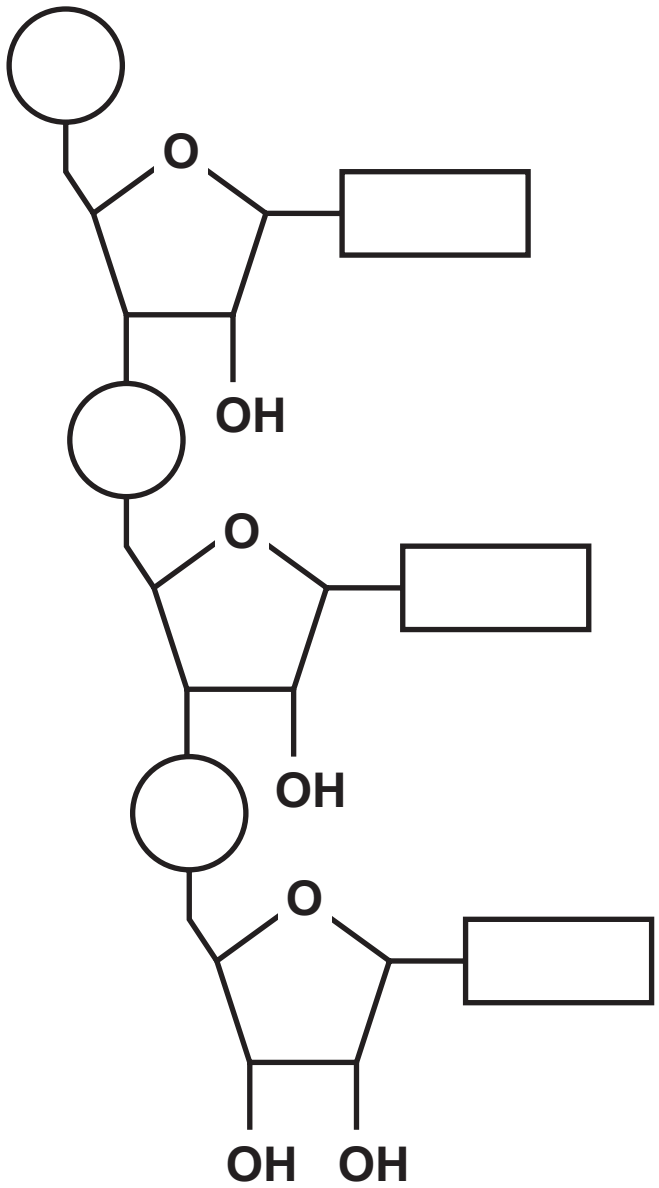


Question 4(a)

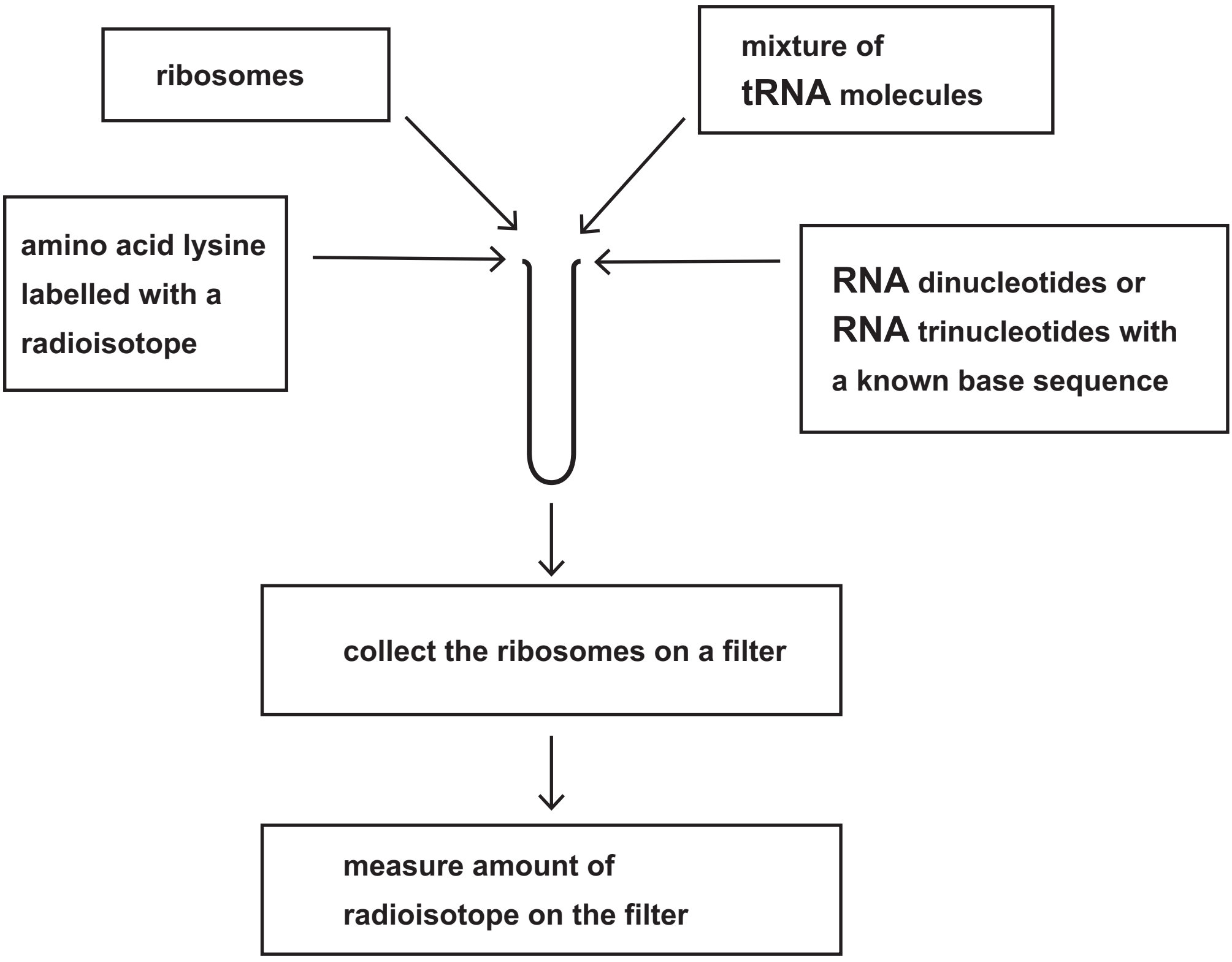
RNA dinucleotide



RNA trinucleotide



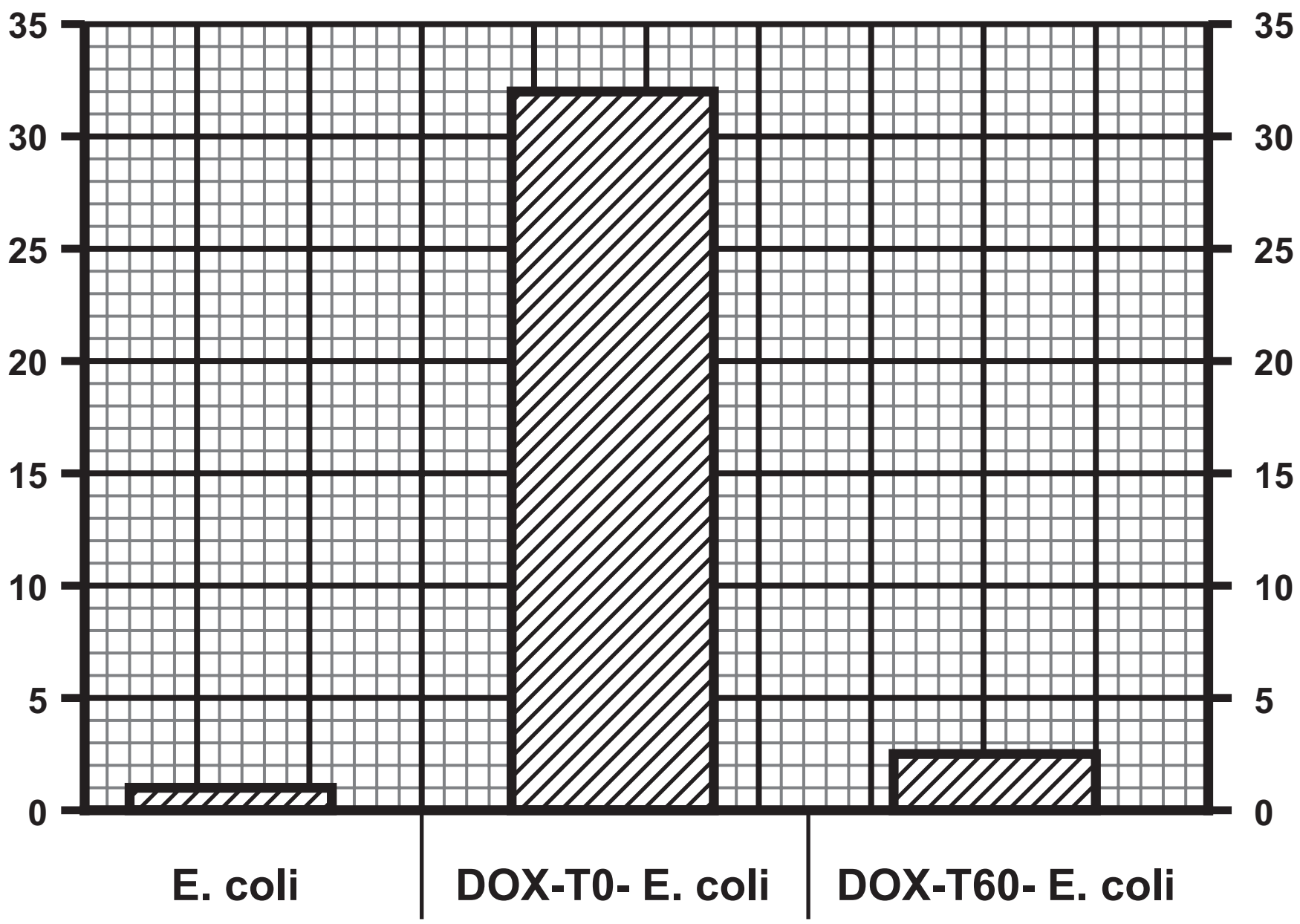
Question 4(b)

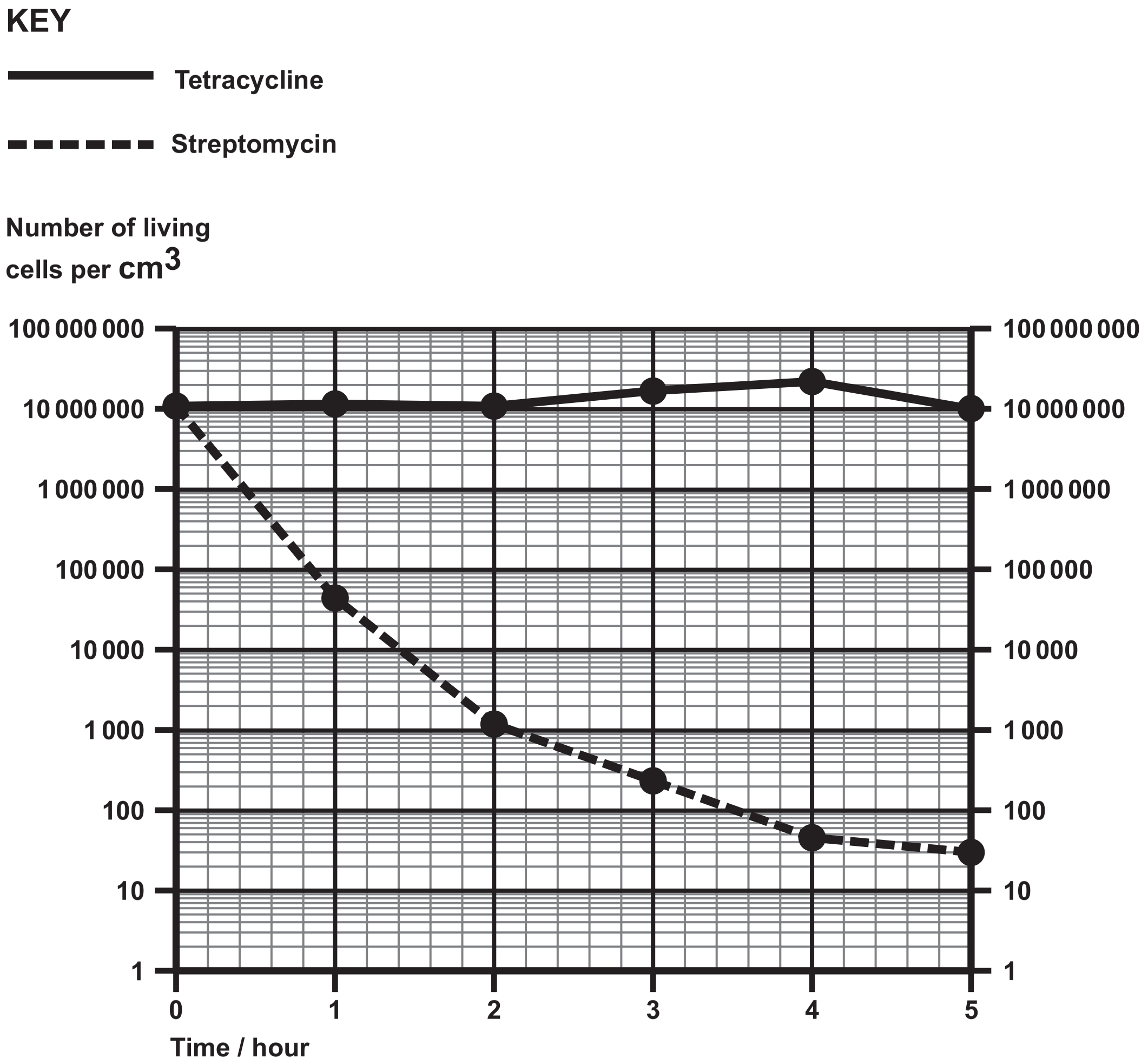

ribosomes
mixture of tRNA molecules
amino acid lysine labelled with a radioisotope
RNA dinucleotides or RNA trinucleotides with a known base sequence
collect the ribosomes on a filter
measure amount of radioisotope on the filter

Question 4(b)(ii)

RNA dinucleotide or trinucleotide used		Presence of tRNA with radioactive lysine on the filter
Trinucleotide	AAA	Yes
	AAG	Yes
	GAA	No
Dinucleotide	AA	No
	AG	No
	GA	No
	GG	No

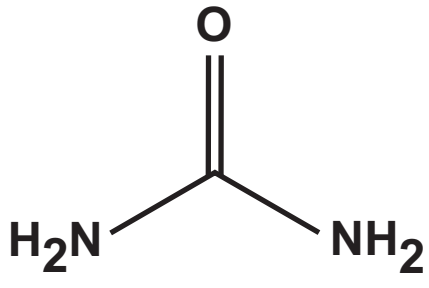
Question 5(b)


Minimum concentration
of antibiotic / a.u.
35
30
25
20
15
10
5
0
E. coli
DOX-T0- E. coli
DOX-T60- E. coli


KEY
Tetracycline
Streptomycin
Number of living cells per cm3
100 000 000
10 000 000
1 000 000
100 000
10 000
1 000
100
10
1
0
1
2
3
4
5
Time / hour

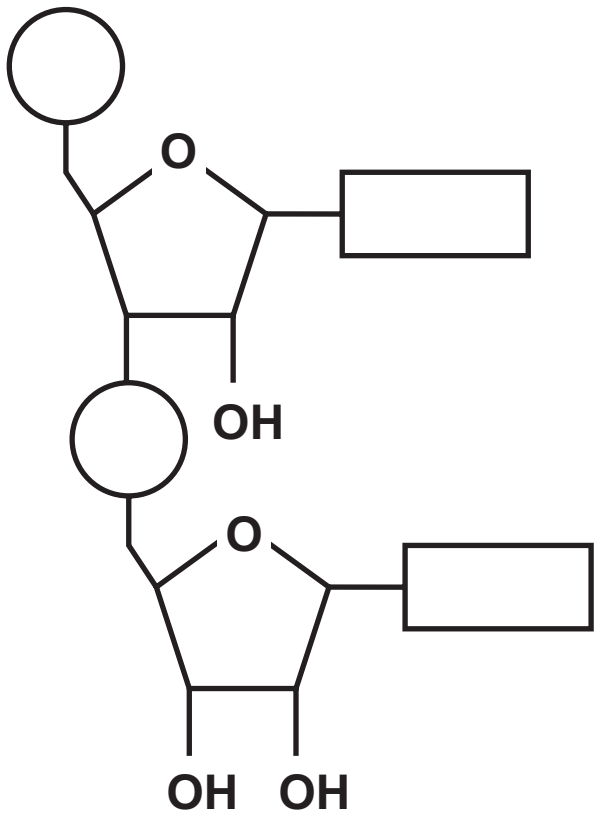
Question 6

Question 8(f)

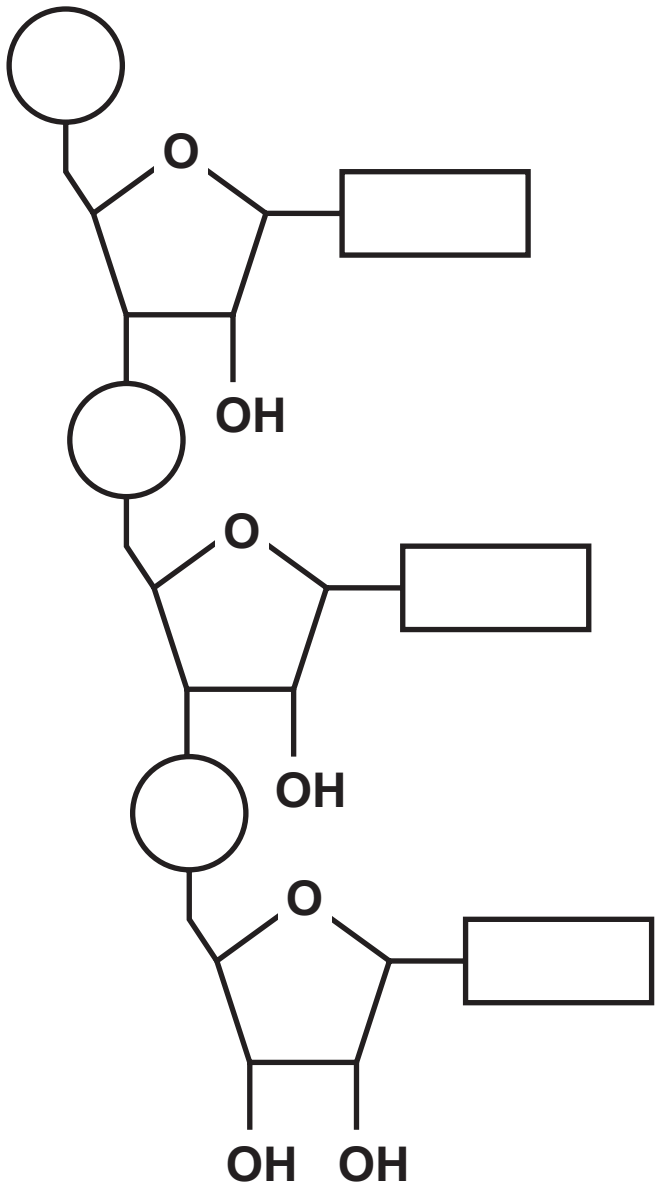


Question 4(a) – Spare copy

RNA dinucleotide



RNA trinucleotide



Question 6

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