

Cambridge International AS & A Level

# BIOLOGY (9700) P1

TOPIC WISE QUESTIONS + ANSWERS | COMPLETE SYLLABUS



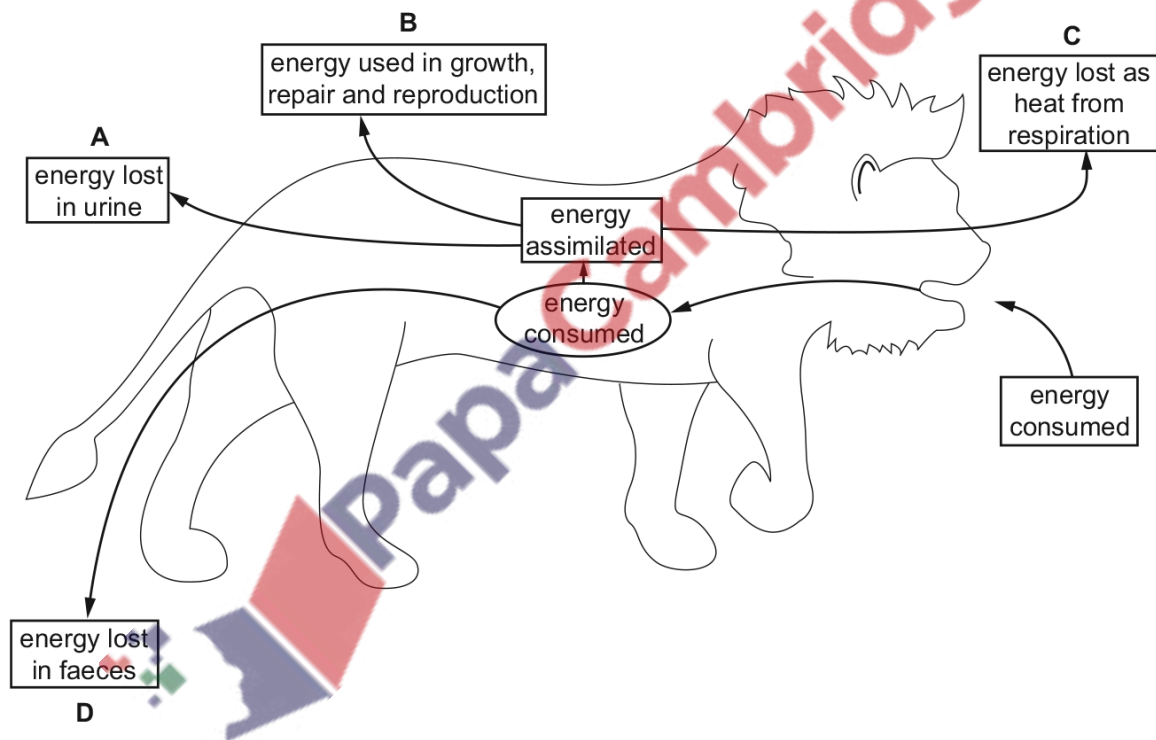
## Chapter 12

# Energy and respiration

### 12.1 Energy

1602. 9700\_s15\_qp-12 Q: 40

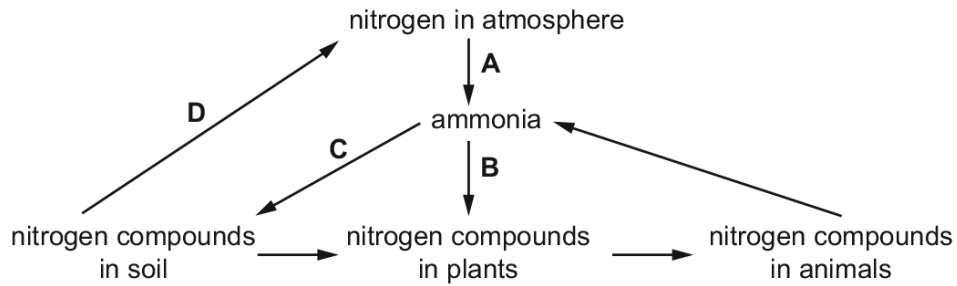
Of the prey consumed by the lion, into which box does the largest amount of energy go?



1603. 9700\_s15\_qp\_13 Q: 38

The diagram represents part of the nitrogen cycle.

Which process is carried out by nitrifying bacteria?

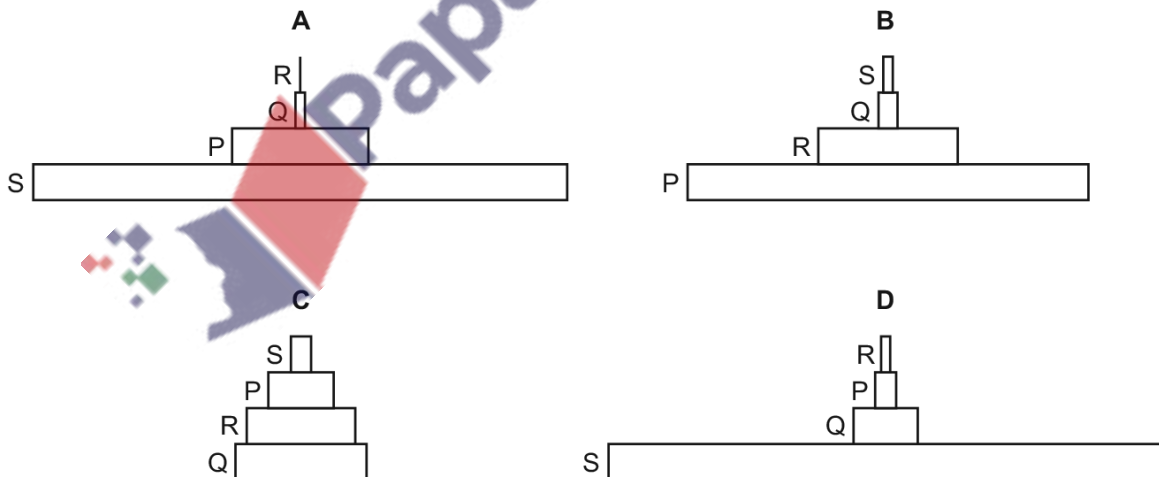


1604. 9700\_s15\_qp\_13 Q: 40

The table shows the results of a field study of four species in a food chain in an area of woodland.

species	number of individuals	biomass of one individual / arbitrary units	energy value per unit mass / arbitrary units
P	10 000	0.100	1.0
Q	5	10.000	2.0
R	500	0.002	1.8
S	3	300 000.000	0.5

Which is the correct pyramid of energy from these data?



## 12.2 Respiration

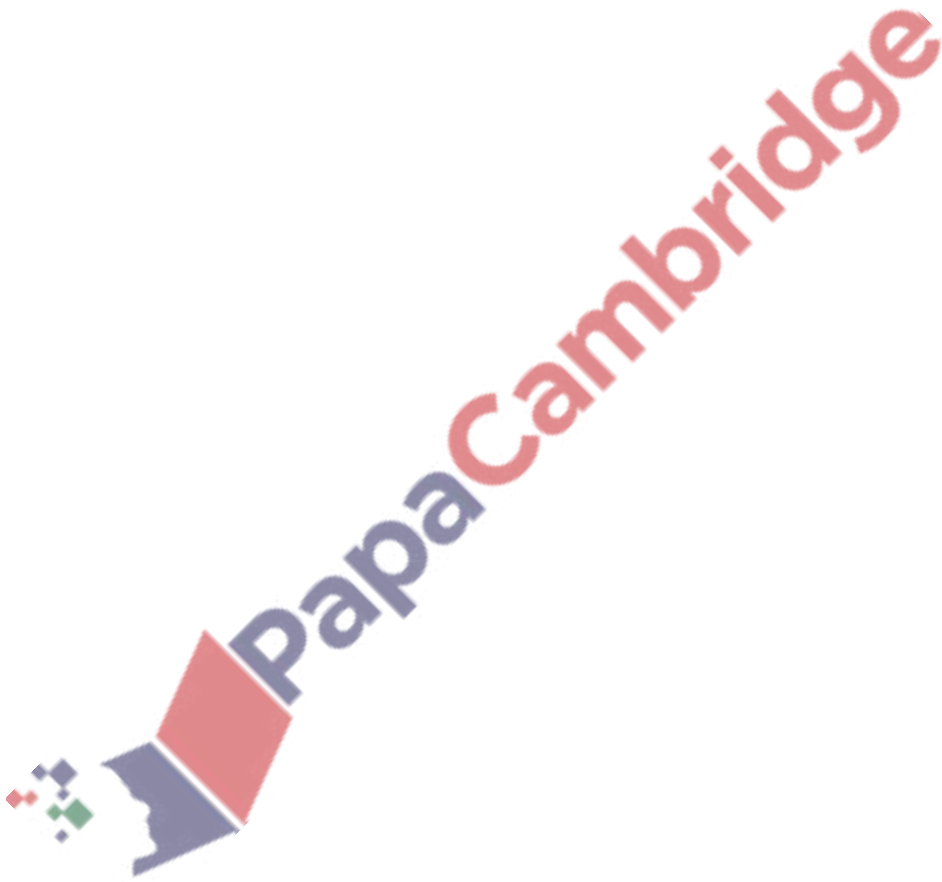
1605. 9700\_w15\_qp\_12 Q: 40

Anaerobic bacteria are found in large numbers in waterlogged soils.

Which effect does this have on soil fertility and why?

	soil fertility	reason
<b>A</b>	decreased	bacteria convert nitrate to ammonia
<b>B</b>	decreased	bacteria convert nitrate to nitrogen gas
<b>C</b>	increased	bacteria cause decomposition
<b>D</b>	increased	bacteria cause nitrogen fixation

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