



Sixth Form Entrance Examination: Biology

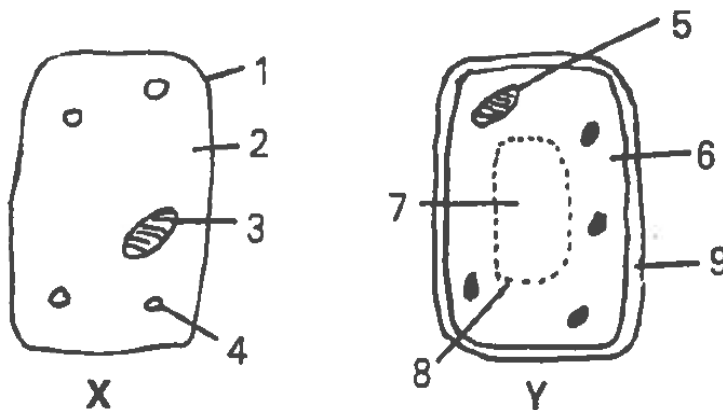
Summary

The Biology Paper will test your understanding and application of biological knowledge. It will cover aspects of the subject up to GCSE Biology Level.

There are two sections, the first being multiple choice and the second section has 2 open ended style questions, followed by questions based around experiments and / or experimental data where candidates may be given unfamiliar material and need to apply their knowledge. The paper is 45 minutes.

Sample questions:

- Which of the following is a characteristic of plant cells only?
A cell membrane
B cell wall
C cytoplasm
D nucleus
E protoplasm
- Which one of the following sets of characteristics is common to both a palisade cell of a leaf and a human cheek cell?
A cell wall, nucleus, chloroplasts
B chloroplasts, cell membrane, nucleus
C cell wall, cell membrane, nucleus
D cell membrane, cytoplasm, nucleus
E cell wall, cell membrane, chloroplasts
- The following diagram shows a plant and an animal cell.

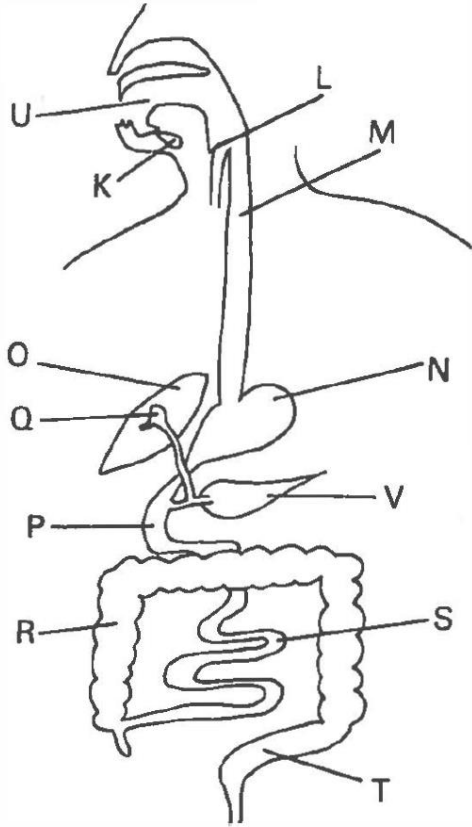


Which features of Y indicate that it is a plant cell?

- A 7, 8, 9 B 5, 6, 8 C 6, 7, 8 D 5, 6, 7 E 5, 7, 9



4. The following diagram illustrates the human digestive system. Indicate which letter(s) give the correct answer to the following statements. Some letters will be used more than once and some letters not at all.



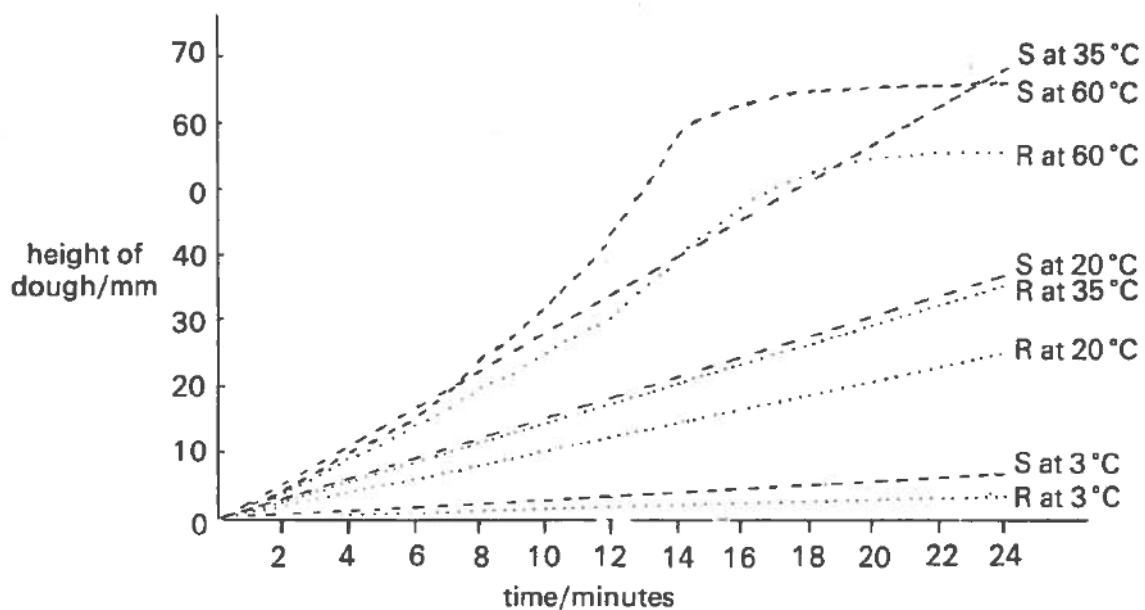
- (a) where saliva is produced
- (b) where most water is reabsorbed
- (c) where the food is churned into a liquid
- (d) the structure which prevents choking
- (e) where digested products are absorbed
- (f) where bile is produced
- (g) where bile is stored
- (h) where carbohydrates are digested
- (i) where fats are digested



5. Some students performed an experiment to investigate the effect of temperature on yeast. They were supplied with two mixtures of dough: **R** contained plain flour, yeast and water; **S** contained plain flour, yeast, sugar and water.

They investigated four different temperatures: 3 °C, 20 °C, 35 °C and 60 °C.

Dough was poured into a measuring cylinder to a depth of 3 cm and a mark made at this level. The height of the dough above this mark was recorded every two minutes. Here is a graph of their results:



- Which dough always rose the most, R or S?
- Can you suggest why this mixture of dough gave consistently better results than the other?
- Which temperature is the best for rising dough?
- What, exactly, causes the dough to rise in this experiment?
- Why do you think so little happened at 3 °C?