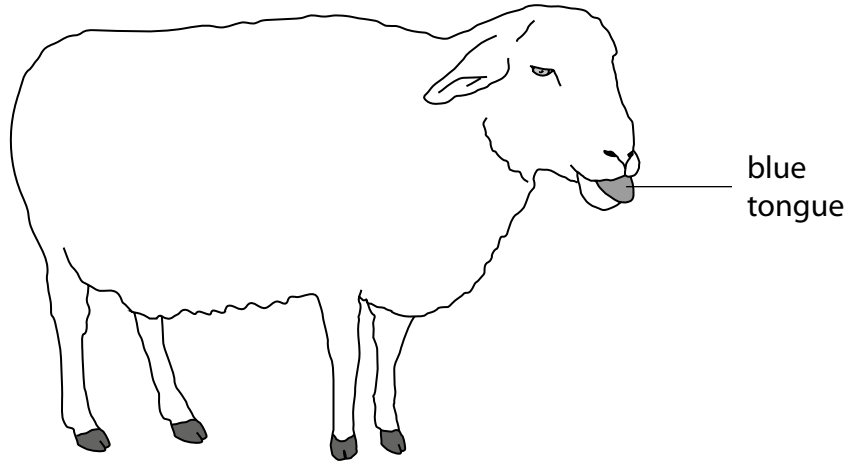


Answer ALL questions. Write your answers in the spaces provided.

- 1 Read the passage below. Use the information in the passage and your own knowledge to answer the questions that follow.

Bluetongue disease in sheep



- 1 Global warming can lead to biological consequences. Some insects are vectors for disease. These insects can move to habitats that were previously too cold for their survival. These insects spread diseases, such as malaria, when they feed on the blood of animals that they bite. Warmer air temperatures increase the rate at which
- 5 insects reproduce, as well as increasing the number of times that the insects bite animals to feed on their blood.

- Bluetongue is a disease that affects sheep. It is common in countries in southern Europe, but was not found in the UK until 2007. The disease has been found in sheep further north in the UK since 2007. Bluetongue is caused by a virus that is
- 10 spread by a small insect, called a midge. Although there are about 995 species of midge, only 20 species are vectors for the bluetongue virus.

- One symptom of bluetongue is fever. When a sheep has a fever, its body temperature rises. If the sheep's temperature becomes very high, it can affect enzymes in sheep cells, which can lead to the death of the sheep. Sheep do not
- 15 sweat, but can lower their body temperature by panting. Panting involves blowing air out of the lungs over the tongue. Another symptom is swelling of the lips and the tongue, which change colour from pink to blue. The blue colour is caused by reduced blood circulation, and it gives the disease its name.

- Bluetongue is difficult to treat. It is possible to prevent the disease by vaccination
- 20 or by controlling the midge vector. The disease can also be controlled by quarantining infected sheep. This involves keeping the infected sheep indoors, away from other sheep.

The cabins of aircraft arriving from other countries are often sprayed with insecticide to kill any insects that may have been present.