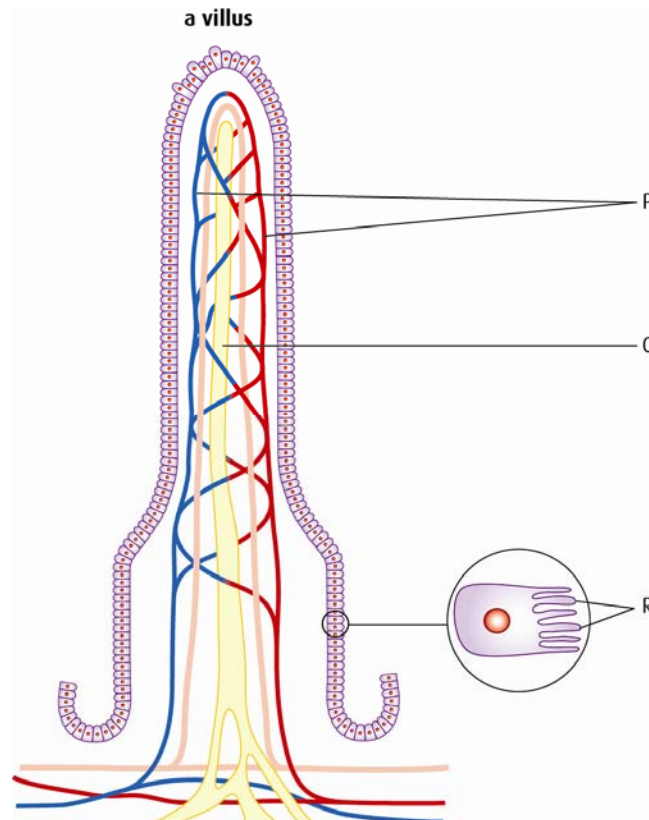


**Support worksheet – Chapter 6**

- 1    **a**    What is meant by the term ‘digestion’? (2)
- b**    State the products of digestion of lipid by a lipase enzyme. (1)
- c**    The diagram below shows a villus in the small intestine.  
Identify the structures P, Q and R. (3)



- d**    Explain how the structure of a villus is related to its role in absorption of digested materials. (3)
- 2    **a**    List **five** substances that are carried in the blood. (5)
- b**    Name the blood vessels that supply the heart with blood. (1)
- c**    For each of the following say whether the statement is true or false.
- i**    Arteries have thick muscular walls to withstand the pressure of blood that is pumped into them. (1)
- ii**   The wall of a capillary is only one cell thick. (1)
- iii**   Semilunar valves are found in veins. (1)
- iv**   The pacemaker of the heart is in the left atrium. (1)

- 3**
- a** HIV is a retrovirus. Name the nucleic acid it contains. (1)
  - b** Name the cells that are infected by HIV. (1)
  - c** Explain why an HIV-infected person may not have any symptoms for several years. (3)
  - d** Discuss **two** ways in which the spread of HIV can be reduced. (4)
  - e** Why are antibiotics not effective against viruses? (1)

- 4** Use this paragraph to help you remember the key processes involved in human breathing (ventilation).

Copy the paragraph and fill in the missing words. (16)

When a person breathes in, the diaphragm \_\_\_\_\_ and changes from a \_\_\_\_\_ shape to a \_\_\_\_\_ shape. At the same time, the \_\_\_\_\_ muscles contract and the \_\_\_\_\_ muscles relax. This moves the ribcage upwards and \_\_\_\_\_, increasing the volume of the thorax. Pressure inside the \_\_\_\_\_ decreases, which means that the lungs increase in volume and this \_\_\_\_\_ the pressure in the \_\_\_\_\_ where gas exchange takes place. Air rushes in through the nose, down the \_\_\_\_\_ and \_\_\_\_\_ to adjust the pressure. When a person breathes out, the diaphragm and \_\_\_\_\_ muscles relax and the \_\_\_\_\_ muscles relax. The pressure in the thorax \_\_\_\_\_ and air is forced \_\_\_\_\_ of the \_\_\_\_\_.

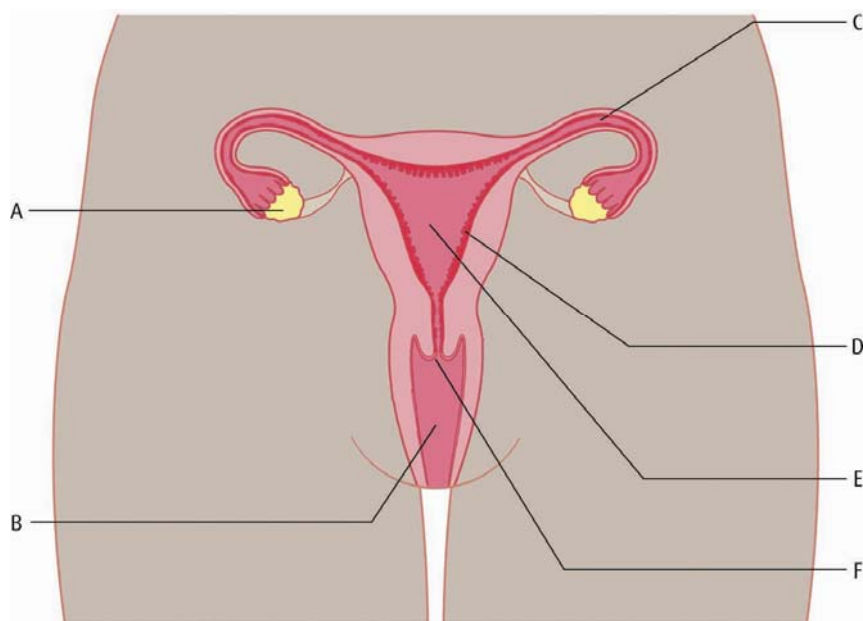
- 5**
- a** Name the **two** structures that make up the central nervous system (CNS). (2)
  - b** Name the neurons that carry messages to the CNS. (1)
  - c** Where in the nervous system would you find the following?
    - i** neurotransmitter (1)
    - ii** myelin (1)
    - iii** motor end plate (1)
  - d** Why is it important to maintain a fairly constant body temperature? (2)

- e** Copy and fill in the spaces in the following paragraph. (5)

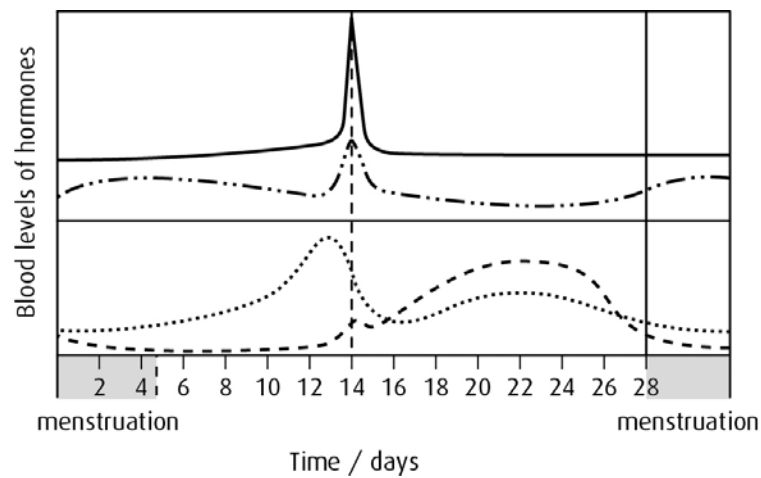
Hormones are produced in \_\_\_\_\_ and carried to their target cells by the \_\_\_\_\_. The hormone insulin is produced in the \_\_\_\_\_ cells of the pancreas and it helps to control \_\_\_\_\_. A person who does not produce insulin suffers from the condition known as \_\_\_\_\_.

- 6 a** Identify which labels on the diagram below show where:

- i** eggs are produced (1)
- ii** fertilisation usually happens (1)
- iii** estrogen and progesterone are produced when a woman is not pregnant. (1)



- b** This graph shows the levels of hormones in a woman's body at different times during the menstrual cycle.



- i** Label the line which shows the level of estrogen. (1)
- ii** Label the line which shows progesterone. (1)
- ii** Draw a cross at the point in the cycle when the egg is released (ovulation). (1)
- c** Suggest **three** reasons why some people object to the use of IVF (*in vitro* fertilisation) to help infertile couples to have children. (3)