Biology Questions – total 20 marks

Q1.

Complete the sentences by putting a cross (☒) in the box next to your answer.

(i) Plants absorb water from the soil.

The plant cells that absorb water from the soil are called

(1)

- ☒ **A** root hair cells
- ☒ **B** palisade cells
- ☒ **C** stomata cells
- ☒ **D** xylem cells

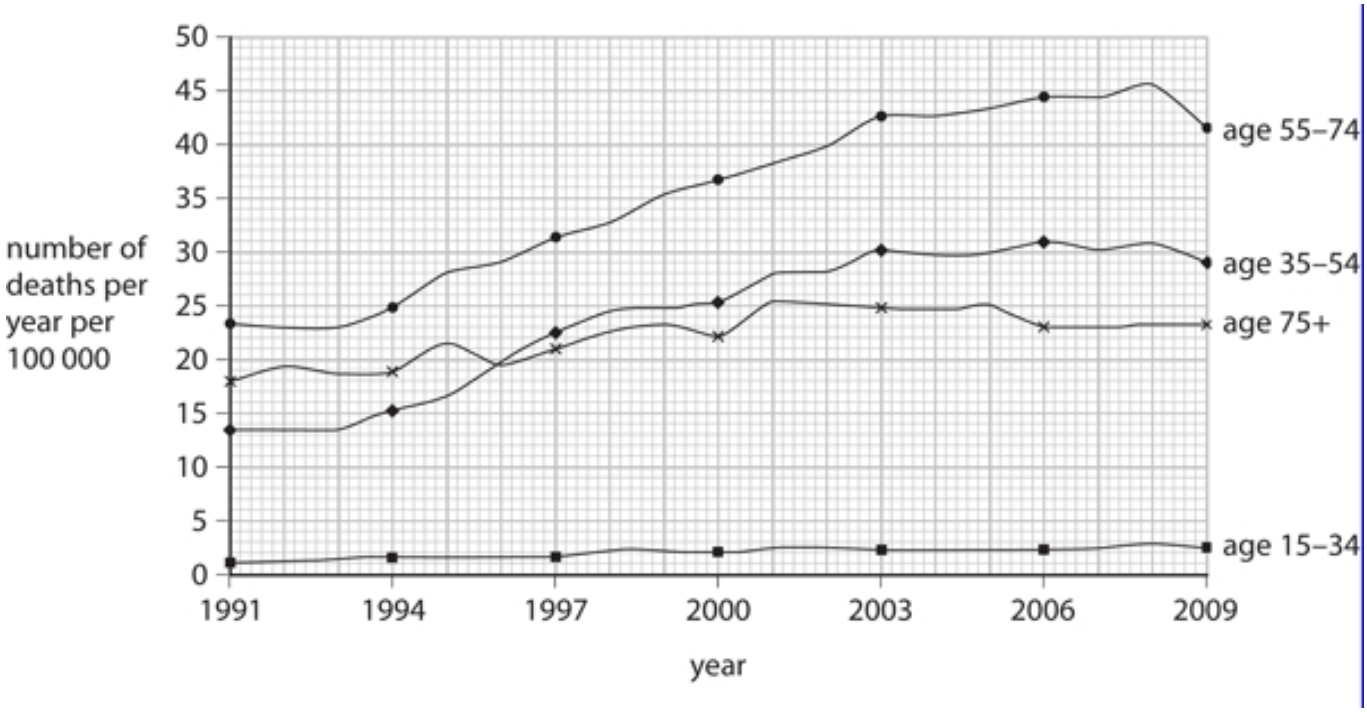
(ii) These cells absorb water by a process known as

(1)

- ☒ **A** active transport
- ☒ **B** osmosis
- ☒ **C** photosynthesis
- ☒ **D** transpiration

Q2.

The graph shows the number of alcohol-related deaths in Britain in four age ranges.



(i) Which age range has the highest number of alcohol-related deaths in Britain?

Put a cross (☒) in the box next to your answer.

(1)

- ☒ **A** 15–34
- ☒ **B** 35–54
- ☒ **C** 55–74
- ☒ **D** 75+

(ii) Describe the trend shown for alcohol-related deaths in the age range 35–54 years.

(2)

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(iii) Suggest **one** reason for the reduction in alcohol-related deaths between 2008 and 2009 for 55–74 year olds.

(1)

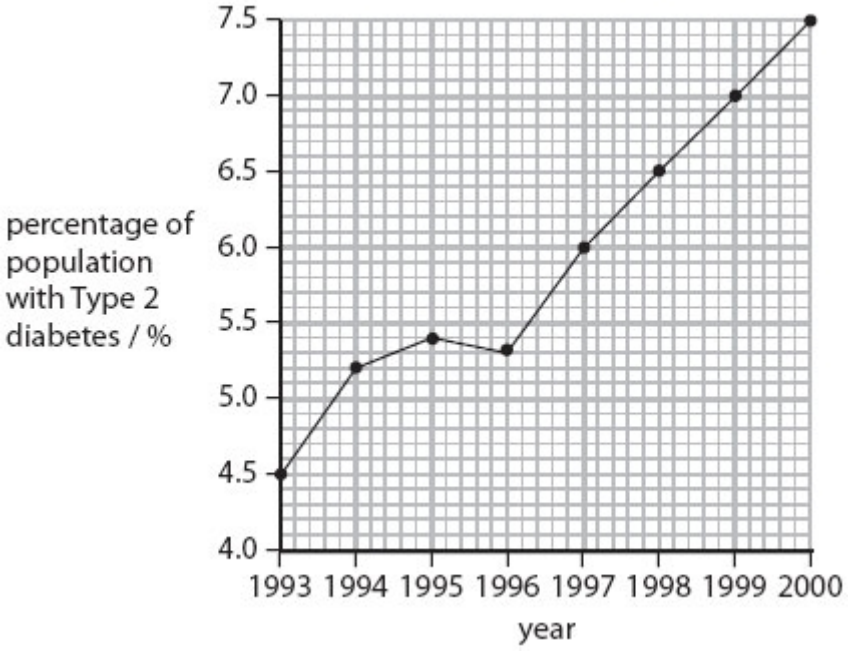
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Q3.

People with diabetes have difficulties regulating their blood glucose concentration.

The graph shows the percentage of the population with Type 2 diabetes between 1993 and 2000.



(a) (i) Describe the overall trend shown in the graph.

(1)

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(ii) Calculate the change in the percentage of the population with Type 2 diabetes between 1993 and 2000.

(2)

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(b) People who are obese can develop Type 2 diabetes.

(i) Body Mass Index (BMI) can be used to indicate obesity.

Complete the sentence by putting a cross (☒) in the box next to your answer.

BMI is calculated using **(1)**

- ☒ **A** mass only
- ☒ **B** height only
- ☒ **C** mass and height
- ☒ **D** mass and blood glucose

(ii) Suggest why people with a high BMI may develop Type 2 diabetes.

(1)

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(c) Describe 2 different methods that people with either Type 1 diabetes or Type 2 diabetes use to regulate their blood glucose concentrations.

(2)

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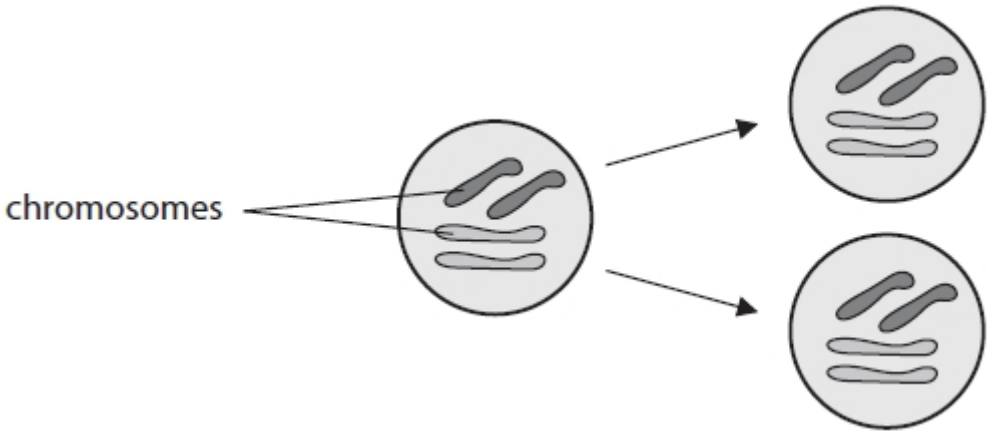
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(Total for Question is 7 marks)

Q4. The diagram shows cell division by mitosis.



A skin cell divides by mitosis once every day to produce new skin cells.

Calculate how many days it would take to produce 16 skin cells from one skin cell.

(2)

..... days

Q5.

In the space below, explain as much as you can about **PHOTOSYNTHESIS**.

(Maximum for question is 5 marks, but candidates are encouraged to write as much as they can)

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(Total for Question is 5 marks)