Write your name here

Surname	Other names

Pearson Edexcel International GCSE

Centre Number | Candidate Number

Biology

Unit: 4BI0
Science (Double Award) 4SC0
Paper: 1B

Practice Experiment Design Questions

Time: 1 hour

Paper Reference
4BI0/1B
4SC0/1B

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of the page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.

Information

- The total mark for this paper is 60.
- The marks for **each** question are shown in brackets
  - use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Write your answers neatly and in good English.
- Check your answers if you have time at the end.

Turn over ▶

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PEARSON

Answer ALL questions.

1 Describe an experiment you would carry out to show the effect of different carbon dioxide concentrations on the growth of a plant.

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(Total for Question 1 = 6 marks)

2 Describe an investigation you could carry out to determine the effect of a chemical fertiliser on the growth of a cereal crop.

(Total for Question 2 = 6 marks)

3 Describe an investigation you could carry out to determine the effect of Vitamin D on the growth rate of young mice.

(Total for Question 3 = 6 marks)

4 Describe an investigation to find out how smoking cigarettes affects heart rate.

(Total for Question 4 = 6 marks)

5 Describe an investigation to find out how sulfur dioxide affects the germination of seeds.

(Total for Question 5 = 6 marks)

6 Describe an investigation to find out if larger female rats produce more offspring than smaller female rats.

(Total for Question 6 = 6 marks)

7 Describe an experiment you could carry out to investigate the effect of acid rain on the growth of a cereal crop.

(Total for Question 7 = 6 marks)

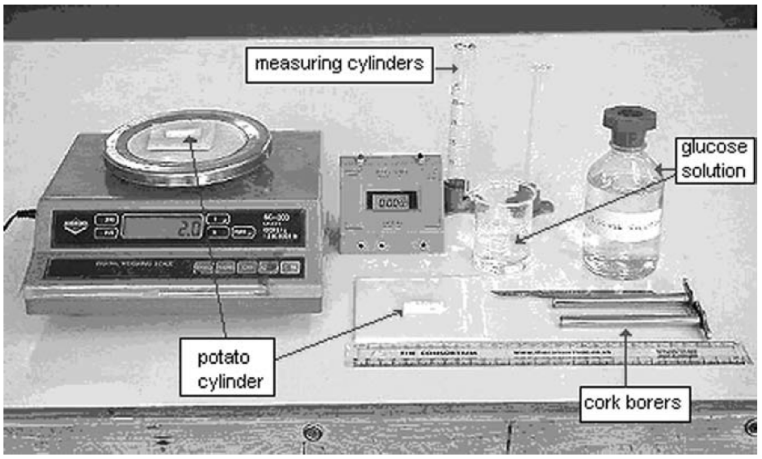
8 Describe an investigation you could carry out to discover the effect of soil water content on the growth of a cereal crop.

(Total for Question 8 = 6 marks)

9 Describe how you could compare the population size of a plant growing in two different places. One place is on the side of a hill and the other place is on a piece of flat ground.

(Total for Question 9 = 6 marks)

10 Water can move into or out of potato tissue by osmosis.
The photograph shows some apparatus that could be used to investigate how the concentration of glucose solution affects this movement of water.



Describe how the apparatus in the photograph could be used to investigate movement of water into and out of potato tissue. You may use other pieces of apparatus if you wish.

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(Total for Question 10 = 6 marks)

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