

Class	Register Number	Name
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南洋女子中學校
NANYANG GIRLS' HIGH SCHOOL
End-of-Year Examination 2020
Secondary Three

B

BIOLOGY
Paper 2 Theory Paper

Monday
 Additional materials: Nil

12 October 2020

1 hour 45 minutes
1000 – 1145

READ THESE INSTRUCTIONS FIRST

Do not open this document until you are told to do so.

Write your name, register number and class in the spaces at the top of this page.

Section B

Answer **three** questions. Question **10** is in the form of an **Either/Or** question. Only **one** part should be answered.

Write your answers in the spaces provided on the question paper.

At the end of the examination, tick **10 Either** or **10 Or** in the grid-box to indicate the question answered.

You are advised to spend no longer than 1 hour on **Section A**, and no longer than 45 minutes on **Section B**. The intended number of marks is given in the brackets [] at the end of each question or part question.

The use of an approved scientific calculator is expected, where appropriate.

Section B

Answer **three** questions.

Question **10** is in the form of an **Either/Or** question. Only **one** part should be answered.
Write your answers in the spaces provided on the question paper.

- 8** A student set up the apparatus shown in Fig. 8.1 to investigate the effect of temperature on the rate of photosynthesis in hydrilla.

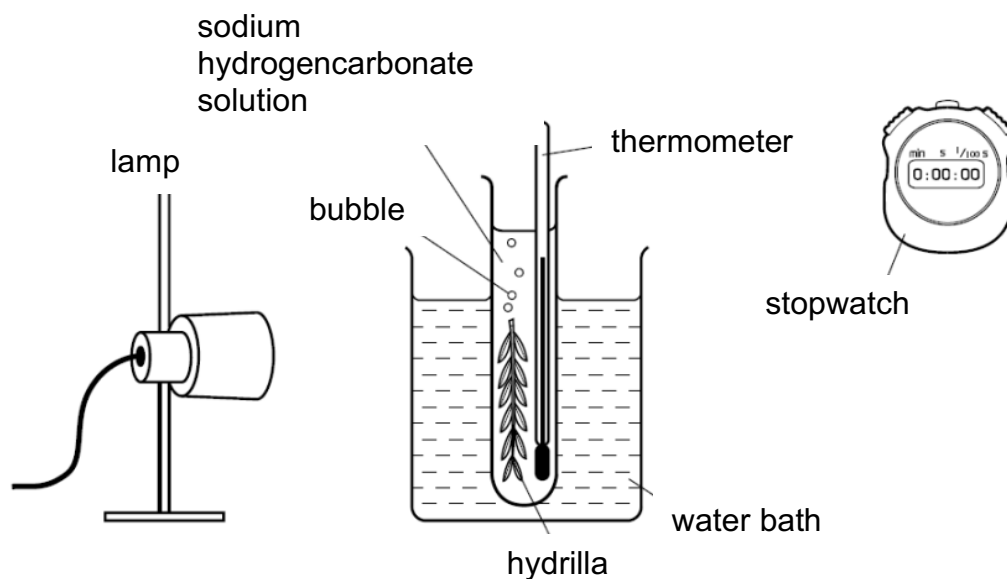


Fig. 8.1

The number of bubbles produced by the leaves in five minutes was recorded. The temperature of the water bath was changed and the experiment was repeated without changing the distance of the lamp from the hydrilla.

The results of the experiment are shown in Table 8.1.

Table 8.1

temperature/ °C	number of bubbles produced in five minutes	number of bubbles produced in one minute
20.0	25	5
25.0	29	6
30.0	58	12
35.0	144	30
40.0	188	38
45.0	161	32
50.0	95	19

(a) Define *enzyme*.

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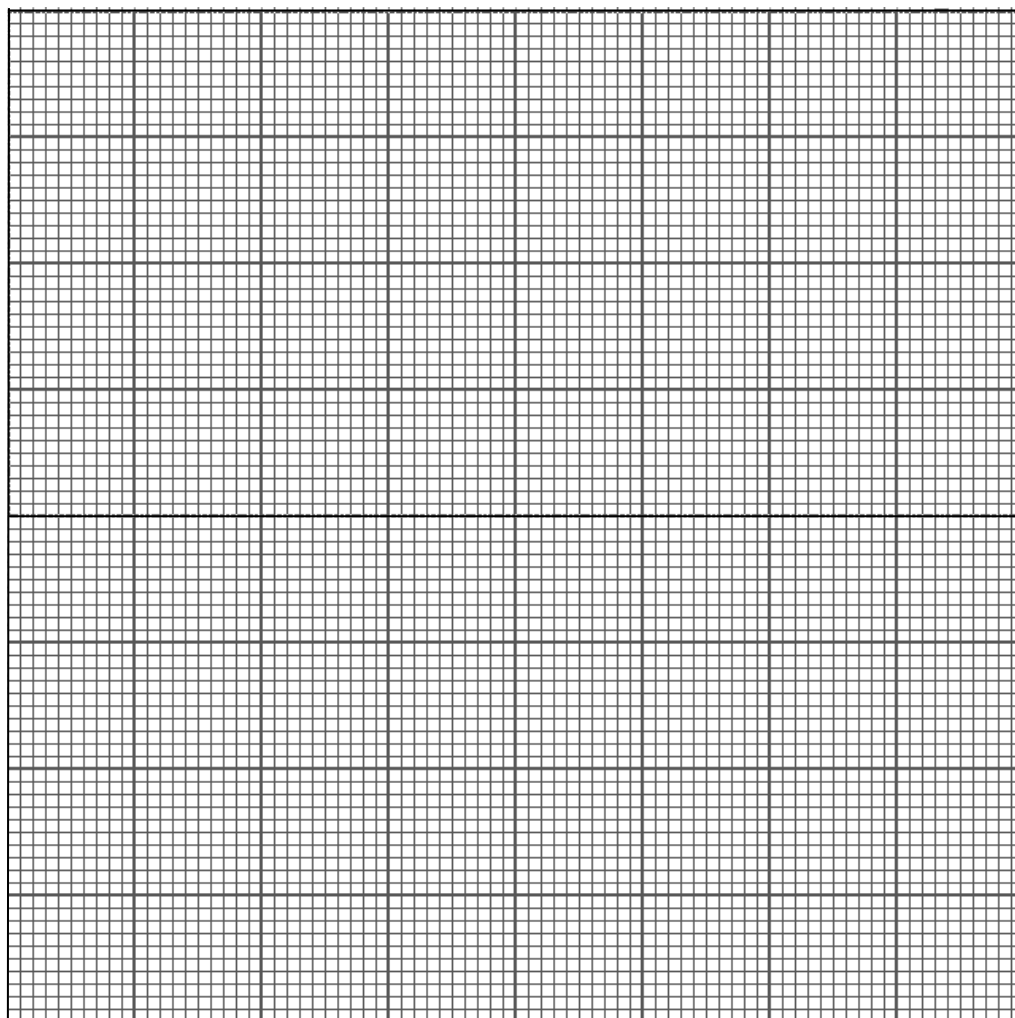
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[1]

(b) (i) Plot a graph to represent the data in Table 8.1, using the grid provided.

You may omit the title of the graph.



[4]

(ii) Explain the shape of your graph.

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting practice. There are no margins, text, or other markings on the page.

[4]

(c) The experiment was repeated with a light bulb of a higher wattage. The results of the experiment were plotted.

Predict the change to the graph you have drawn in **(b)(i)**.

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[1]

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[total: 10]
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9 (a) (i) Describe the structure of a triglyceride molecule.

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[4]

(ii) Describe the alcohol emulsion test in detail and state the observed positive result.

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[3]

(b) Explain the advantages of storing excess glucose as glycogen.

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[3]

[total: 10]

Question 10 is in the form of an **Either/Or** question. Only **one** part should be answered.

10 Either

- (a)** Describe the events involved in the complete digestion of deep-fried chicken cutlet, starting from the stomach to the small intestines.

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[5]

- (b)** Explain the structural adaptation of the small intestine for absorption of digested food nutrients.

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[5]

[total: 10]

10 Or

(a) Describe how a leaf is adapted for photosynthesis.

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[6]

(b) A well-watered plant was left in bright sunlight for five hours.

Describe and explain the steps involved in testing if the plant has photosynthesised.

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[4]

[total: 10]

End of Paper 2 Booklet B

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