



NSS BIOLOGY

Martindale

Intensive Notes and Exercises

FOR THE
HKDSE Book 2

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Introduction 書本簡介

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本書共有194頁

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EXERCISE – REPRODUCTION IN FLOWERING PLANTS

STSE = Science, Technology, Society and Environment NOS = Nature of Science
 SI = Scientific Inquiry # = Advanced Level contents included

1. The diagram below shows the appearance of a plant which flowers near the Lunar New Year:



- (a) B is an underground vegetative structure.

(i) From which part of the parent plant does it develop?

(1 mark)

(ii) Describe how B has given rise to A.

(2 marks)

DETECTION OF LIGHT AND SOUND IN HUMANS

12

12.1 Introduction

A. Irritability

- ☉ the ability of an organism to **detect** and **respond** to a stimulus

B. Stimulus

- ☉ the **change** in conditions of the environment of the organism

C. Receptor

- ☉ a specialised cell or a group of specialised cells that detect the stimuli and produce **nerve impulses**

D. Sense organ

- ☉ a complex structure formed from a group of receptors working together

E. Response

- ☉ the **reaction** produced by the organism after receiving a stimulus

F. Effector

- ☉ the part of the body or the organ (usually **muscle** or **gland**) that produces **responses**

9 REPRODUCTION IN FLOWERING PLANTS

* – correct spelling required

Suggested Answers

1. (a) (i) • stem (1)
 (ii) • B supplies food to buds (1)
 • which develop into A (1).
 (b) • To enable the shoot to continue to carry out photosynthesis (1)
 • so that sufficient food is available for the production of a new vegetative structure (1).
 (c) • It is not wind-pollinated (1)
 • since its anthers and stigma are not hanging out of the flower (1).
 (d) (i) • get flowers/new plants more rapidly (1)
 • maintain the desired quality of the flowers (1)
 (ii) • may give rise to flowers of a better quality (1)
2. (a) Light is necessary for onion bulb germination (1)
 (b) Light is not necessary for onion bulb germination (1)
 (c) • Change the cotton wool in one of the two set-ups into dry cotton wool (1)
 • Cover set-up I with a light-proof box / remove the light-proof box in set-up II (1)
 • This enables the two set-ups differ only in the condition being investigated (1)
 • while all other conditions are kept constant to ensure fair comparison (1)
 (d) • The daughter plants can develop faster (1)
 • This is a surer method to produce onion plants (1)
 • All daughter plants have the desirable characters retained (1)
 Any 2 of the above or other reasonable answers
3. (a) (i) • 1 is *stigma (1)
 • 5 is *sepal (1)

Special notes

Please be reminded that plants developed from vegetative organs are also capable of sexual reproduction.

The two set-ups must differ only in the factor being investigated – water in this experiment.



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About the Author

Mr. Andy Tse has been teaching senior-form Biology in EMI schools with great success for 24 years. He has written many tailor-made exercise books to help local Biology students in their daily assessments and public examinations. This new series of books represents Mr. Tse's determination in preparing Biology students to meet the challenges imposed by the NSS Curriculum and to tackle the unprecedented HKDSE Examination.

About the Book

NSS Biology – Intensive Notes and Exercises is a series written for the Biology and Combined Science (Biology) Curricula. It aims to prepare local students to tackle the HKDSE Examination effectively.

Key features:

- notes are concise and comprehensive
- questions resemble closely those of the HKDSE sample papers
- questions are written in line with the Curriculum Emphases of the NSS Biology Curriculum



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