

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION
ADVANCED LEVEL
SEPTEMBER 2004

Subject: BIOLOGY
Paper Number: Paper 4
Date: 4th September 2004
Time: 9.00 a.m. to 10.30 a.m.

Directions to Candidates

- Write your index number in the space at the top right-hand corner of this page.
 - Answer ALL questions. Write all your answers in this answer booklet. Drawings of biological material and graphical representations of data are to be made on the appropriate pages within this booklet.
 - The mark allocation is indicated at the end of each question. Marks allocated to parts of questions are also indicated.
 - You are reminded of the necessity for good English and orderly presentation in your answers.
 - In calculations you are advised to show all the steps in your working, giving your answer at each stage.
 - The use of electronic calculators is permitted.
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For examiners' use only:

Question	1	2	3	Total
Score				
Maximum	15	15	10	40

ADVANCED BIOLOGY IV (Practical)

1. You are provided with specimens **A, B, C** and **D**:

1.1 For each of specimens A, B, C and D, name **TWO** major taxonomic groups (any two from Kingdom, Phylum/Division and Class) within which the organism is classified. Write your answers in the table below.

	First major taxonomic group	Second major taxonomic group
Specimen A		
Specimen B		
Specimen C		
Specimen D		

[two marks]

1.2 For each of specimens A, B, C and D, list those structural features **visible in the specimen provided** which are diagnostic of the particular phylum or division to which it belongs.

Specimen A:

Specimen B:

Specimen C:

Specimen D:

[four marks]

ADVANCED BIOLOGY IV (Practical)

1.3 Select any **TWO** specimens from **A, B and C** (do not use specimen D for this part of the exercise) and:

(a) Comment on the probable mode of life of the organisms you have selected as indicated by their visible structural adaptations.

[three marks]

(b) Compare and contrast the visible structural adaptations of the two organisms you have selected.

[three marks]

1.4 Write brief notes on the structural features visible in Specimen D.

[three marks]

[Total: fifteen marks]

ADVANCED BIOLOGY IV (Practical)

2. Examine the external and internal features of the biological material provided. Draw clear, carefully labelled and annotated figures to illustrate these features. Use the space provided in the box below and in any of the blank spaces on the following pages for your drawing.

[Total: fifteen marks]

Title:

ADVANCED BIOLOGY IV (Practical)

Blank space to be used in conjunction with Question 2.

Title:

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