

**GCE A LEVEL**

1400U50-1C



S24-1400U50-1C

For APRIL/MAY 2024**To be opened on receipt in JANUARY 2024****BIOLOGY – A2 unit 5****Practical Examination****INSTRUCTIONS TO TEACHERS/EXAMS OFFICERS****Experimental Task****TESTS 1 and 2****CONFIDENTIAL**1400U501C
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This document should be stored securely by the exams officer when not in use by the teacher/technician. This document must not be stored within the science department when not in use by the teacher/technician. Its contents should not be divulged except to those concerned with the preparation of the assessment.

A. General Instructions

1. The Experimental Task will consist of one session of 120 minutes duration. Two versions of the test will be set for use on dates specified by WJEC as follows:

Test 1 – WEDNESDAY, 1 MAY 2024 (day 1)**Test 2** – THURSDAY, 2 MAY 2024 (day 2)

The vast majority of candidates will take Test 1. Test 2 should only be used in centres where it is **not practically possible** to accommodate all candidates on day 1. Centres requiring Test 2 (for use on day 2) should already have informed WJEC that this is the case. Please contact the subject support officer at WJEC (science@wjec.co.uk) as a matter of urgency if this has not been done. **No individual candidate may undertake both tests.**

Centres must schedule the test as early as is possible on the appropriate date, and where more than one session is required on a single day, centres must ensure that candidates in later sessions have no opportunity to communicate with those who have already taken the test.

2. The test should be invigilated by a person other than an A level Biology teacher.
3. An A level Biology teacher must be present in the examination room to deal with any technical difficulties that may arise, including matters of safety and the awarding of the teacher assessed marks.
4. Teachers should ensure that each candidate has adequate working space and that the candidates are set a reasonable distance apart. Each candidate requires uninterrupted access to the allocated apparatus – one set of apparatus per candidate (except where indicated).
5. Centres will receive sufficient copies of the examination papers for Test 1 (and Test 2 if applicable).
6. Teachers may open the “**Setting up Instructions**” document 1 week before Test 1 (i.e. Wednesday, 24 April 2024). **This is for the purpose of ensuring that the apparatus functions well enough for the candidates to complete the assessment fully. Teachers are encouraged to try out the task, WHILST PRESERVING THE CONFIDENTIALITY OF THE ASSESSMENT. This document should be stored securely by the exams officer when not in use by the teacher.**
The full version of the examination paper will not be available until the day of the examination (i.e. Wednesday, 1 May 2024).
7. Following a recent specification amendment, candidates are to be given a list of the main topic areas to be assessed in the Experimental Task and in the Practical Analysis Task prior to the assessment. **In order to implement this, page 7 of this document should be copied and given to candidates as soon as possible after receipt of this document.** This information is also published on the WJEC GCE Biology web page.
8. Teachers need to ensure that the teacher assessed marks are recorded on the front of each candidate’s paper. Guidance on the awarding of these marks will be provided in the “Setting up Instructions” document.
9. The completed Experimental Tasks must be stored securely by the exams officer. Once the Practical Analysis tasks are completed the exams officer should pair up the Experimental Task and Practical Analysis task for each candidate and place them in the order of the candidate register. These should then be sent to the examiner as soon as possible after the Practical Analysis Task has taken place. **Teachers should not be given access to the completed examination papers after the actual assessments have taken place.**
10. Examiners will require teachers’ results for the test. These must be recorded clearly on the “Information from Centres” form (which will be in the “Setting up Instructions” document). This information must be sent to the examiner along with the examination papers.

11. The examination papers will be externally marked by a WJEC examiner. The same examiner will mark both the experimental tasks and practical analysis tasks for a centre. The name and address of the examiner will be issued to centres by the end of April.
12. Monitoring visits will take place on a random sample of centres to ensure the practical examination is being administered correctly. Visiting monitors will require access to candidates' "lab books" on the day(s) of the examination. **This includes the day of the Practical Analysis Task.**

B. Specific Instructions

Details of the apparatus and materials required for the tests follow.

If any difficulty is experienced in providing the apparatus, the WJEC should be informed as soon as possible.

Contacts:

Subject Officer: Liane Adams

029 2240 4252, science@wjec.co.uk

Subject Support Officer: Eira Morgan

029 2240 4252, science@wjec.co.uk

Apparatus Required**Tests 1 and 2**

Each candidate will need to be provided with:

eye protection

150 cm³ 20 vol hydrogen peroxide

distilled water

2 × 10 cm³ measuring cylinders

2 × 50 cm³ measuring cylinders

5 × boiling tubes in a rack

1 × forceps

paper towels

1 × piece of potato

1 × scalpel/knife

pestle and mortar

ruler

1 × white tile

2 × dropping pipettes

filter paper discs

1 × stirring rod

beaker of water for washing forceps/stirring rod

marker pen

stopwatch

Test 2

The same as Test 1, but candidates will be making different concentrations of hydrogen peroxide within the same range.

Teacher/Technician notes**For Test 1 and 2:****Hydrogen peroxide solution**

The 20 vol hydrogen peroxide should be made fresh from 100 vol stock solution up to a week before the practical exam. It should be stored in a cool, dark place.

The 20 vol hydrogen peroxide solution is an irritant but is not classified as hazardous once it has been diluted below 18 vol. The 20 vol solution given to candidates should be labelled "irritant".

Candidates will be making their own solutions of hydrogen peroxide from the 20 vol solution.

Preparation of potato

Ensure potatoes are fresh.

The potato pieces should be cut with a 1 cm chipper or a number 4 or 5 cork borer. Each candidate will need approximately a 3 cm length of potato. The potato pieces should be prepared on the morning of the assessment. They should not be stored in water.

Equipment

The test tube racks should allow the candidates to see the top of the solution level when 40 cm³ of solution is in each boiling tube.

Filter paper discs should be cut using a hole punch and separated out. Each candidate should be provided with at least 20 filter paper discs.

The dropping pipettes are required for accurate measurement when candidates are producing the hydrogen peroxide solutions.

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BIOLOGY – A2 unit 5
Practical Examination

TOPIC AREAS FOR ASSESSMENT IN UNIT 5 IN SUMMER 2024

This page should be copied and given to candidates.

Knowledge, understanding and skills related to the following topic areas will be assessed:

- 1.4 Biological reactions are regulated by enzymes
- 2.1 All organisms are related through their evolutionary history
- 2.3 Adaptations for transport
- 3.5 Population size and ecosystems

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