

## Advance Information for Summer 2022

### GCSE (9–1)

### Biology A (Gateway Science)

### J247

We have produced this advance information to help support all teachers and students with revision for the Summer 2022 exams.

#### Information

- The format/structure of the papers remains unchanged.
- This notice covers all examined components.
- For each paper, the main list shows the major focus of the content of the exam.
- Topics **not** assessed, either directly or synoptically, have also been listed.
- The information is presented in specification order, **not** in question order.
- Assessment of practical skills, maths skills, and Working Scientifically skills will occur throughout all of the papers.
- You are **not** permitted to take this notice into the exam.
- This document has **3** pages.

#### Advice

- It is advised that teaching and learning should still cover the entire subject content in the specification, so that students are as well prepared as possible for progression.
- Topics not explicitly given in either list may appear in low tariff questions or via synoptic questions (e.g., questions where students are asked to bring together knowledge, skills and understanding from across the specification).
- Students will still be expected to apply their knowledge to unfamiliar contexts.

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**J247/01**

- Section 1.2 What happens in cells (and what do cells need)?
- Section 2.2 The challenges of size
- Section 3.1 Coordination and control – the nervous system
- Section 3.2 Coordination and control – the endocrine system
- Section 3.3 Maintaining internal environments

Required practical skills that **will be assessed**:

- Practical Activity Group 1: Use a microscope to make observations.
- Practical Activity Group 2: Testing for the presence of biological molecules.
- Practical Activity Group 8: Investigate transport of molecules in and out of cells.

There are **NO** topics that are **not assessed** in this paper.

**J247/02**

- Section 4.1 Ecosystems
- Section 5.1 Inheritance
- Section 6.1 Monitoring and maintaining the environment
- Section 6.3 Monitoring and maintaining health

Required practical skills that **will be assessed**:

- Practical Activity Group 3: The use of sampling techniques to investigate organisms in a habitat.
- Practical Activity Group 4: Investigation of the most favourable conditions for composting.
- Practical Activity Group 7: Investigate the effectiveness of antimicrobial agents on the growth of a bacterial lawn.

Topics **not assessed** in this paper:

- Section 1.2 What happens in cells (and what do cells need)?
- Section 3.2 Coordination and control – the endocrine system

**J247/03**

- Section 1.2 What happens in cells (and what do cells need)?
- Section 2.1 Supplying the cell
- Section 2.2 The challenges of size
- Section 3.2 Coordination and control – the endocrine system

Required practical skills that **will be assessed**:

- Practical Activity Group 1: Use a microscope to make observations.
- Practical Activity Group 2: Testing for the presence of biological molecules.
- Practical Activity Group 4: Investigate the factors that can affect the rate of enzyme activity.
- Practical Activity Group 6: Investigate tropic responses in plant shoots.

There are **NO** topics that are **not assessed** in this paper.

**J247/04**

- Section 5.1 Inheritance
- Section 5.2 Natural selection and evolution
- Section 6.1 Monitoring and maintaining the environment
- Section 6.3 Monitoring and maintaining health

Required practical skills that **will be assessed**:

- Practical Activity Group 3: The use of sampling techniques to investigate organisms in a habitat.
- Practical Activity Group 4: Investigation of the most favourable conditions for composting.
- Practical Activity Group 7: Investigate the effectiveness of antimicrobial agents on the growth of a bacterial lawn.

Topics **not assessed** in this paper:

- Section 1.1 Cell structure
- Section 1.3 Respiration
- Section 2.2 The challenges of size
- Section 3.1 Coordination and control – the nervous system

**END OF ADVANCE INFORMATION**

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