

A Level Physics Student Guidance

Timed Assessments

Assessment 1 (1.5 hours) DATE: - 30th April Period 1-2

Content - topics 1 – 6 (only periodic motion)

Assessment 2 (1.5 hours) DATE: - 7th May Period 1-2

Content - topics 6(only thermal physics) – 8

Assessment 3 Section A (45mins) DATE: - 18th May Period 5

Content - Practical Skills

Assessment 3 Section B (45mins) DATE: - 24th May Period 4

Content – Option Unit Turning points in Physics

Structure of Assessments

- Assessment 1 and Assessment 2 will be composed of structured questions equating to 50 marks and 10 multiple choice questions. Total number of marks for each paper 60 marks.
- Paper 3 (section A and B) will be composed of structured questions equating to 30 marks for each section.

Key Areas for Revision

Assessment 1 Structured Questions (50 marks)

- Photoelectric Effect , including stopping potential
- Interference of waves
- Electrical circuits, including EMF and internal resistance, general circuit rules and related calculations
- D- t and V – t graphs, equations of motion
- Conservation of energy
- Momentum and Newton’s Laws of motion
- The fluorescent tube and energy levels

Assessment 1 Multiple Choice Questions (10 marks)

This section covers multiple areas covered during year 12. Please note the following topic areas which are assessed only equate to a single mark so spend your time wisely when tackling these questions.

- Simple Harmonic Motion - understanding of basic equations and energy considerations
- Conservation of momentum
- Young Modulus - including graphs
- Decay of strange particles
- Snell's Law - including critical angle
- Circular motion calculations
- Stationary waves
- Wave – particle duality - de Broglie Wavelength

Assessment 2 Structured Questions (50 marks)

- Gravitational fields – including Kepler's 3rd law, escape velocity
- Capacitors – including charging and discharging graphs and equations
- Thermal physics – including specific heat capacity and latent heat, internal energy of matter
- Electromagnetic induction – including application of Faraday's Law
- Nuclear Physics – including Rutherford's scattering experiment, distance of closest approach

Assessment 2 Multiple Choice Questions (10 marks)

This section covers multiple areas covered during year 13. Please note the following topic areas which are assessed only equate to a single mark so spend your time wisely when tackling these questions.

- Field patterns
- Gas laws
- Charged particles in electric fields
- Electromagnetic Induction
- Nuclear stability
- Gravitational field strength and Gravitational potential graphs
- Electric potential calculations
- Nuclear decay and fusion calculations

Assessment 3A Structured Questions (30 marks)

- Simple Harmonic Oscillators – practical skills/procedures based questions linked to the oscillating pendulum.
- Understanding of percentage uncertainties
- Manipulation of equations involving log relationships and log graphs
- Investigating the EMF and Internal Resistance of a power source
- Manipulation and interpretation of linear relationships

Assessment 3B Structured Questions (30 marks)

- Millikan's oil drop experiment
- Newton's theory of light and Huygens wave theory, Fizeau experiment
- Electron diffraction, momentum and TEM

Revision Resources

I have suggested some links below which you might find helpful.

Practice questions and going over previous papers and mark schemes is one of the key and best revision techniques for Physics. [AQA past papers](#)

Written by Bob Eagle, the [Physics A Level Playlist](#) is an excellent set of video tutorials.

[s-cool.co.uk](#) has plenty of A and AS level Physics revision resources including not only notes but also practice questions and guides.

[physicsandmathstutor.com](#) contains a huge amount of detailed revision notes for AQA as well topic-based exam questions.

[physicsnet.co.uk](#) - A great resource with revision notes applicable to AS and A2 Level courses.

[alevelphysicsonline.com](#) - Provides plenty of revision aides including revision checklists, videos and past papers.

Specification can be downloaded from the AQA website.

<https://www.aqa.org.uk/subjects/science/as-and-a-level/physics-7407-7408>

Class time after Easter:

Please be assured that we will be using class time after Easter to help you prepare for each assessment and we will make use of past paper questions as classroom-based activities. Your teachers are here to support you so that you are thoroughly prepared.

No new content will be covered after Easter

Easter Holidays:

We advise you to make good use of your Easter holiday to prepare for all of your timed assessments. Please ensure that you review your class notes thoroughly and that you make use of additional resources, e.g. the pack of examination papers that you have with associated mark schemes

If you have any questions that you would like help with over the Easter holiday please do not hesitate to email us at:

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Best wishes

R Ram

J Coughlan