

# The Syllabus

## *Edexcel Advanced Subsidiary Advanced GCE in Physics Syllabus*

Unit number	Unit title
6731	Unit 1: Mechanics and radioactivity Unit test PHY1 (AS and A)
6732	Unit 2: Electricity and thermal physics Unit test PHY2 (AS and A)
6733/01 6733/02	Unit 3: Topics Topics test PHY3 and Practical test PHY3 (AS and A)
6734	Unit 4: Waves and our universe Unit test PHY4 (A only)
6735/01 6735/02	Unit 5: Fields and forces Unit test PHY5 and Practical test PHY5 (A only)
6736	Unit 6: Synthesis Synoptic test PHY6 (Terminal Unit) (A only)



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## Unit 1: Mechanics and radioactivity

AS and A

এছাৰ হক ক্ষমতাৰ ডহ অডুস এ ঙ্গ বাউ ধহফ পড়া বৎ ব্ৰপঃকক্ষহবধৎ স ডঃগুডহ, অডুৎপবৎ ধহফ স ডুস বহঃ, ঘ বৰি গুডুৎ ৎ অঃৎঃ ধহফ গ্যকক্ষফ ক্ষৰি ৎ, ফু হধস কপং, স ডুস বহঃ স , ঘ বৰি গুডুৎ ৎ 2nd law, mechanical energy, radioactive decay and the nuclear atom.

## Unit 2: Electricity and thermal physics

AS and A

This unit includes electric current and potential difference, electrical circuits, heating matter, specific heat capacity, specific latent heat, temperature, kinetic model of matter, conservation of energy, the first law of thermodynamics and efficiency.

## Unit 3: Topics

AS and A

Students study *one* out of the following four topics.

### 3A — Astrophysics

Observing stars; the lives of stars.

### 3B — Solid materials

Investigating materials; engineering materials.

### 3C — Nuclear and particle physics

Stable and unstable nuclei; fundamental particles.

### 3D — Medical physics

Nuclear medicine; X-rays and ultrasonics.

## Unit 4: Waves and our Universe

A only

This unit includes circular motion and oscillations, simple harmonic motion, waves, superposition of waves, quantum phenomena and the expanding Universe.

## Unit 5: Fields and forces

A only

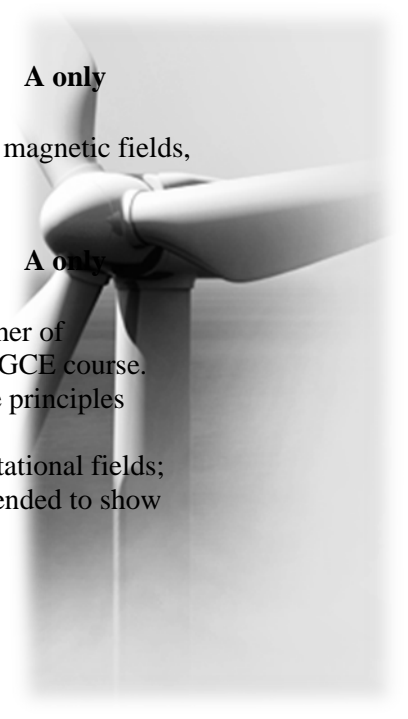
The first part of this unit covers gravitational fields, electric fields, capacitance, magnetic fields, and electromagnetic induction.

## Unit 6: Synthesis

A only

This is a synoptic unit. Synoptic assessment involves the explicit drawing together of knowledge, understanding and skills learned in different parts of the Advanced GCE course. The emphasis of synoptic assessment is on understanding and application of the principles included in the specification.

The first section of this unit compares springs and capacitors; electric and gravitational fields; capacitor discharge and radioactive decay. The second part, Accelerators, is intended to show



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how an area of modern physics unites different areas of physics, such as electric fields, circular motion and momentum. It should be regarded as illustrating applications of these areas. Both of these sections will be assessed synoptically as part of the synoptic test.

