

# AS Level – Physics Syllabus Content and RAG Record

## AS Paper 1/2:

RAG guidance – when you have finished learning about a topic colour in column 1 GREEN if you feel you understand it very well, AMBER if you understand it quite well but are not completely confident and RED if you feel your understanding is limited. Each time you revise a topic complete the next RAG column. This will help you to reflect on what you do/don't understand so that you can concentrate your efforts on the weaker areas. Hopefully you will see more greens appearing each time you revise a topic.

<b>Key Topic -</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Measurements and their errors</b>						
Use of SI units and their prefixes						
Limitation of physical measurements						
Estimation of physical quantities						

<b>Particles and radiation</b>						
Constituents of the atom						
Stable and unstable nuclei						
Particles, antiparticles and photons						
Particle interactions						
Classification of particles						
Quarks and antiquarks						
Applications of conservation laws						
The photoelectric effect						
Collisions of electrons with atoms						
Energy levels and photon emission						
Wave-particle duality						

<b>Waves</b>						
Progressive waves						
Longitudinal and transverse waves						
Principle of superposition of waves and formation of stationary waves						
Interference						
Diffraction						
Refraction at a plane surface						

<b>Mechanics and materials</b>						
Scalars and vectors						
Moments						
Motion along a straight line						
Projectile motion						
Newton's laws of motion						
Momentum						
Work, energy and power						
Conservation of energy						
Bulk properties of solids						
The Young modulus						

<b>Electricity</b>						
Basics of electricity						
Current-voltage characteristics						
Resistivity						
Circuits						
Potential divider						
Electromotive force and internal resistance						

## AS Level – Physics Syllabus Content and RAG Record

### **Paper 1.**

What's assessed? Section 1 to 5 and 6.1

How is it assessed? 1.5 hour written exam worth 70 marks

Question type. 70 Marks of short and long answer questions.

### **Paper 2.**

What's assessed? Section 1 to 5 and 6.1

How is it assessed?

Section A. 20 marks of short and long questions on practical skills and data analysis.

Section B. 20 marks of short and long questions on all areas of AS content.

Section C. 30 multiple choice questions worth 30 marks.