Cambridge Assessment International Education

Cambridge Pre-U Physics (9792)

Additional guidance for this syllabus
Advance information will provide a list of topics that will be the focus of the assessment. The topics for each question will be listed in syllabus order. Topics not explicitly given in the list may still be assessed, for example in low tariff items or as part of the synoptic element of some questions.

Additional guidance for Component 9792/01: Multiple Choice
No additional guidance is given for this component.

Additional guidance for Component 9792/02: Written Paper
Questions on this component will address the following topics from the syllabus.

	Topic focus
Section 1	
Question 1	A1 Mechanics: • scalars and vectors • moment of a force A2 Gravitational fields: • centre of gravity
Question 2	A3 Deformation of solids: • elastic and plastic behaviour • stress and strain
Question 3	A1 Mechanics: • kinematics • Newton's laws of motion • conservation of linear momentum A2 Gravitational fields: • gravitational field strength
Question 4	A1 Mechanics: • pressure A4 Energy concepts: • work • power • specific heat capacity
Question 5	A5 Electricity: • electric current • potential difference and electromotive force (emf) • resistance and resistivity

	Topic focus
Section 1	
Question 6	A6 Waves: • longitudinal and transverse waves • polarisation
Question 7	A6 Waves: • progressive waves A7 Superposition: • phase difference • interference
Question 8	A8 Atomic and nuclear processes: • the nucleus • nuclear processes • fission and fusion
Question 9	A7 Superposition A9 Quantum ideas: • wave-particle duality
Section 2	
Question 10	The question will focus on content covered in the pre-release material.

Additional guidance for Component 9792/03: Written Paper
Questions on this component will address the following topics from the syllabus.

	Topic focus
Section 1	
Question 1	A5 Electricity: • resistance and resistivity B12 Electric fields: • capacitance
Question 2	A4 Energy concepts: • potential and kinetic energy B10 Rotational mechanics: • centripetal acceleration B13 Gravitation: • Kepler's laws • Newton's law of gravity • gravitational potential energy
Question 3	B14 Electromagnetism: • concept of a magnetic field • force on a current-carrying conductor • electromagnetic induction
Question 4	B16 Molecular kinetic theory: • kinetic theory of gases • equation of state Practical skills: • planning • procedures • evaluation
Question 5	B17 Nuclear physics: • equations of radioactive decay
Question 6	B20 Astronomy and cosmology: • standard candles • stellar radii • Hubble's law Practical skills: • practical data processing • analysis

	Topic focus
Section 1	
Question 7	A9 Quantum ideas: • the photon B18 The quantum atom: • line spectra • energy levels in the hydrogen atom
Section 2	
Question 8	B10 Rotational mechanics: • moment of inertia • kinematics of rotational motion
Question 9	B12 Electric fields: • electric potential • electric field of a point charge
Question 10	A1 Mechanics: • kinematics • Newton's laws of motion A4 Energy concepts: • energy conversion and conservation B11 Oscillations: • simple harmonic motion • energy in simple harmonic motion
Question 11	B12 Electric fields: • uniform electric fields B14 Electromagnetism: • electromagnetic induction B15 Special relativity: • Einstein's special principle of relativity • length contraction
Question 12	B16 Molecular kinetic theory: • kinetic theory of gases • equation of state • entropy • second law of thermodynamics
Question 13	B19 Interpreting quantum theory: • interpretations of the double-slit experiment

Additional guidance for Component 9792/04: Personal Investigation
No further additional guidance is given for this component.