DESIGN BRIEFS

PHYSICS STAGE 2
WACE Examination Design Brief

Item Type	Supporting Information
Section One: Short answer (40±5)% of 120 marks 40–55 marks 50–80 minutes Up to 20 questions	Questions in Section One (Short answer) will be structured as individual items, or as a short sequence of items linked to a common scenario. One or two estimation questions would be suitable here. Suitable stimulus materials for scenarios may be from various sources such as original material, scientific journals and current events where physics is involved.
Section Two: Problem-solving (50±5)% of 120 marks 55–65 marks 80–100 minutes Up to 8 questions	Questions in Section Two (Problem-solving) will be structured as a longer sequence of items linked to a scenario. These should provide opportunities for students to apply learned concepts, principles and strategies to solve problems set in unfamiliar scenarios. A sequence of items should form a scaffold to indicate the nature and depth of answer expected, and to guide students to the highest level they are able to achieve.
Section Three: Comprehension (10±5)% of 120 marks 5–20 marks 15–35 minutes Up to 2 questions	Questions in Section Three (Comprehension) will be structured as a series of items linked to an extended written stimulus such as a press article or a report on an experiment or investigation, or an extended graphical stimulus such as a series of scientific diagrams or graphs. The stimulus material should not exceed one page in length. At least one question in Section C will sample student understanding of Outcome 1 by giving details of an investigation.
Constraints/Resourcing Implications	Clearance for copyright may be required. There is no requirement for colour to be used.

OTHER CONSIDERATIONS

The Stage 2 examination should be set to suit levels 4-6. There should be greater emphasis on practical scenarios and short answer items; and less emphasis on comprehension items, problem solving items and estimation items.

The examination structure will include sets of short response questions based around a common scenario. Additional information about scenarios may be provided as students progress through the questions. In any paper it is likely that a variety of scenarios will be provided.

The examination will be presented in a combined question/answer booklet. Each question involves a scenario where information is given in discrete parts, with spaces for answers. Linked items should be sequenced in order of increasing complexity. After each item, maximum marks will be indicated, and space for answers will be provided. Together, these will indicate the maximum length of response required. Suggested maximum working times for sections will also be given. Sufficient time should be allowed for students to complete questions to the highest level possible.

Items may involve descriptions, diagrams, calculations, estimations (in situations where insufficient data is provided to enable students to ascertain a precise answer), tables and graphs. Instructions to candidates will indicate that unless otherwise specified, their working or reasoning should be shown clearly when responding to items involving calculations.

EXAMINATION LENGTH

The total examination length is 3 hours and 10 minutes. This comprises a written paper of 3 hours working time and 10 minutes reading/planning time.

PERMISSIBLE MATERIALS

The general materials permitted for use in the WACE examination are: pens, pencils, eraser or correction fluid, ruler, highlighter.

The special materials permitted for use in the WACE examination are non-programmable scientific calculators, MATHOMAT and/or Mathaid, drawing compass, and a protractor; and a formulae and constants insert sheet (A4 booklet size).

PHYSICS STAGE 3
WACE Examination Design Brief

Item Type	Supporting Information
Section One: Short answer (30±5)% of 150 marks 35–50 marks 40–60 minutes Up to 15 questions	Questions in Section One (Short answer) will be structured as individual items, or as a short sequence of items linked to a common scenario. One or two estimation questions would be suitable here. Suitable stimulus materials for scenarios may be extracted from various sources such as original material, scientific journals and current events where physics is involved.
Section Two: Problem-solving (50±5)% of 150 marks 65–80 marks 75–100 minutes Up to 8 questions	Questions in Section Two (Problem-solving) will be structured as a longer sequence of items linked to a scenario. These should provide opportunities for students to apply learned concepts, principles and strategies to solve problems set in unfamiliar scenarios. A sequence of items should form a scaffold to indicate the nature and depth of answer expected, and to guide students to the highest level they are able to achieve.
Section Three: Comprehension (20±5)% of 150 marks 20–35 marks 35–50 minutes Up to 2 questions	Questions in Section Three (Comprehension) will be structured as a series of items linked to an extended written stimulus such as a press article or a report on an experiment or investigation, or an extended graphical stimulus such as a series of scientific diagrams or graphs. The stimulus material should not exceed one page in length. At least one question in Section C will sample student understanding of Outcome 1 by giving details of an investigation. Questions in Section C should introduce students to unfamiliar content, requiring them to apply learned concepts, principles and strategies to solve problems using the unfamiliar content.
Constraints/Resourcing Implications	Clearance for copyright may be required. There is no requirement for colour to be used.

OTHER CONSIDERATIONS

The Stage 3 examination should be set to suit levels 6–8. There should be greater emphasis on comprehension items, problem solving items, and estimation items; and less emphasis on practical scenarios and short answer items.

The examination structure will include sets of short response questions based around a common scenario. Additional information about scenarios may be provided as students progress through the questions. In any paper it is likely that a variety of scenarios will be provided.

The examination will be presented in a combined question/answer booklet. Each question involves a scenario where information is given in discrete parts, with spaces for answers. Linked items should be sequenced in order of increasing complexity. After each item, maximum marks will be indicated, and space for answers will be provided. Together, these will indicate the maximum length of response required. Suggested maximum working times for sections will also be given. Sufficient time should be allowed for students to complete questions to the highest level possible.

Items may involve descriptions, diagrams, calculations, estimations (in situations where insufficient data is provided to enable students to ascertain a precise answer), tables and graphs. Instructions to candidates will indicate, that unless otherwise specified, their working or reasoning should be shown clearly when responding to items involving calculations.

EXAMINATION LENGTH

The total examination length is 3 hours and 10 minutes. This comprises a written paper of 3 hours working time and 10 minutes reading/planning time.

PERMISSIBLE MATERIALS

The general materials permitted for use in the WACE examination are: pens, pencils, eraser or correction fluid, ruler, highlighter.

The special materials permitted for use in the WACE examination are non-programmable scientific calculators, MATHOMAT and/or Mathaid, drawing compass, and a protractor; and a formulae and constants insert sheet (A4 booklet size).