

**WORKED SOLUTIONS**

**Worked Solutions for CSEC<sup>®</sup> Examinations 2012–2016**

# Physics

**Pauline Anning**

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FOR CSEC<sup>®</sup> EXAMINATIONS  
2012–2016

# Physics

PAULINE ANNING

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# 1 INTRODUCTION

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## What is this book about?

This book is your companion to the Caribbean Examinations Council (CXC) Secondary Education Certificate examination (CSEC) in Physics.

It contains five sets of 60 multiple choice questions similar to those that will appear on Physics Paper 01, together with answers to these questions.

It also contains complete answers to the questions set on the Physics Paper 02 in the May/June series of examinations between the years 2012 and 2016.

In addition to the answer to each question, an appropriate explanation is given, so you don't just get the right answer but, more importantly, you can see how it has been worked out! There is also an indication of how the marks are distributed so you can see how you might get partial credit for an answer even if it isn't totally correct.

## How can I use this book?

This book is designed to help you to increase your knowledge of physics and improve your chances of success in your forthcoming examination.

One of the best ways for you to find out exactly what you know (or don't know) and how well you can organise your knowledge is to try to answer actual examination questions taken from past papers.

In addition to examination questions there is a chapter on how to revise. This will help you to draw up a revision timetable, and tell you how to stay focused on what you have to do. The chapter also includes tips from experienced examiners on how to avoid throwing away marks by making silly mistakes and how to squeeze those few extra marks by writing down what you know in the clearest possible way. Those few extra marks just might earn you a higher grade!

This book is a very flexible revision aid and you can use it in different ways depending on what best suits your revision programme.

- At the end of your revision programme you could simply try to answer the questions on the examination papers to check how much physics you know by comparing your answers with those in this book.

However, this book allows you to make far better use of the examination questions as an actual part of your revision programme.

At the back of the book there is a **Table of Topics** from the Physics syllabus. This is a list of short topics which together cover the entire content of the Physics syllabus. Alongside each topic there is a list of questions about that topic that appear in the multiple choice tests and in the 2012–2016 examination papers.

- A hard and daunting task, like revising for your Physics examination, is often made easier by breaking it down into smaller parts. You may decide to organise your revision programme topic by topic and test yourself at the end of each topic. Each time you complete a topic you will have the satisfaction of knowing a little more and that will give you the confidence to carry on with your studies.

- You may be having trouble with particular topics. You can use the topic list to identify the questions about these topics very easily and concentrate your time on them. This might be useful at the end of your revision when time is short.

After completing the questions, you might like to compare your marks with the grade indicators provided by the examination board. This will give you some idea of what grade you are likely to get in your forthcoming examination.

Remember, there is far more to this book than simply providing a set of correct answers. Read the explanation given for each question carefully, even if you got the question correct. It will help you to organise your answers in order to get all of the marks available. You will be able to apply much of the advice given on examination technique and organisation when you come to answer the questions in your examination.

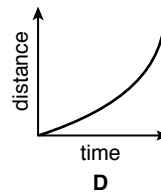
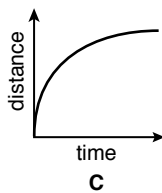
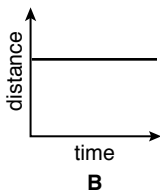
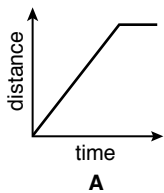
# 3 PHYSICS – PAPER 01 – MULTIPLE CHOICE QUESTIONS

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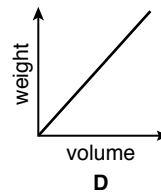
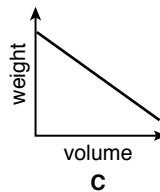
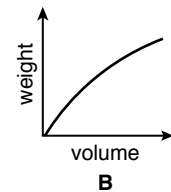
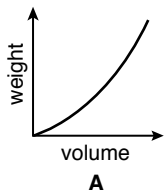
## Paper 01 Test A

- 1 An object is taken from the Earth to the Moon. Which of the following statements about the mass and weight of the object is correct?
- A The mass decreases and the weight stays the same.
  - B The mass increases and the weight stays the same.
  - C The mass stays the same and the weight decreases.
  - D The mass stays the same and the weight increases.
- 2 Which of the following calculations gives the density of a substance?
- A mass + volume
  - B mass/volume
  - C mass  $\times$  volume
  - D mass – volume
- 3 A mass  $m$  is raised to a height  $h$  in a time  $t$ . What is the average power generated?
- A  $mh/t$
  - B  $mt/h$
  - C  $mgh/t$
  - D  $ht/gm$
- 4 The newton is the SI unit of
- A density.
  - B force.
  - C momentum.
  - D pressure.
- 5 Which of the following is equivalent to 200 milligrams?
- A 0.2 grams
  - B 0.02 grams
  - C 0.002 grams
  - D 0.0002 grams

- 6 A micrometer screw gauge could be used to accurately measure
- A the cross-sectional area of a wire.
  - B the diameter of a wire.
  - C the radius of a wire.
  - D the resistance of a wire.
- 7 A car travels at a steady speed then stops at some traffic lights. Which of the following is the distance-time graph for the journey?



- 8 In an experiment, the weights and volumes of differently shaped pieces of wood were measured. The results were plotted on a graph. Which graph shows the results?



- 9 Which one of the following statements about speed and velocity is correct?
- A Speed gives both the magnitude and the direction of motion
  - B Speed only gives the direction of motion
  - C Velocity gives both the magnitude and the direction of motion
  - D Velocity only gives the direction of motion
- 10 A cube of length of side 2 cm and weight 8 N is placed on a surface. The pressure exerted on the surface by the block is
- A  $8 \text{ N cm}^{-2}$
  - B  $4 \text{ N cm}^{-2}$
  - C  $2 \text{ N cm}^{-2}$
  - D  $1 \text{ N cm}^{-2}$