

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

October 2023

Question Paper Log Number: P75626A

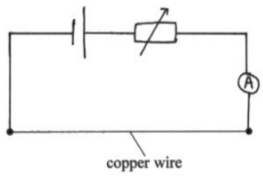
Publications Code: WPH16_01_MS_2310

All the material in this publication is copyright

© Pearson Education Ltd 2023

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Question Number	Answer	Mark
1(a)	<p>EITHER</p> <p>The wire will get hot (1)</p> <p>Turn off the power supply between readings</p> <p>Or</p> <p>Add a resistor to the circuit (1)</p> <p>OR</p> <p>There may be a short circuit (1)</p> <p>Add a resistor to the circuit (1)</p> <p>OR</p> <p>There is a risk of electric shock (from the copper wire) (1)</p> <p>Use insulated wire (1)</p>	2
1(b)	<p>Circuit including d.c. power supply and ammeter in series with copper wire (1)</p> <p>Circuit includes means of varying current, e.g. variable resistor (1)</p> <p>[Ignore additional components that do not prevent circuit working as expected]</p> 	2
1(c)	<p>There are not enough readings (1)</p> <p>The range of readings is too small (1)</p> <p>The (relationship predicts that the graph should be a straight line through the origin</p> <p>Or</p> <p>The relationship is in the form $y = mx$ (1)</p> <p>An accurate best fit line can't be drawn</p> <p>Or</p> <p>A straight line graph can't be confirmed</p> <p>Or</p> <p>A y-intercept of zero can't be confirmed</p> <p>Or</p> <p>Direct proportionality can't be confirmed (1)</p>	4
Total for question 1		8