Exam Board:	AQA
Subject:	Physics
Paper:	Physics Paper 1
Marks available:	100
Length of paper:	1 hour 45 minutes
Topics:	Energy, Electricity, Particle Model of Matter, Atomic Structure

Exam Information, guidance and hints

Command words:

- Complete - Fill in gaps/add labels
- Give - Recall a simple fact
- Draw - Draw a symbol, diagram or graph
- Describe - Give details about an event, idea or a process
- Explain - Give reasons for an event, idea or process (use because/so)
- Compare - Identify how things are similar/different
- Suggest - Use your own knowledge in an unfamiliar context
- Calculate - Use numbers in a formula
- **Higher Tier:** Determine - Work something out mathematically or with a graph and use this in a written answer

Online Resources

- Cognito past papers

Hints/tips: You need to memorise the following formulae/calculations

- How to calculate a % of a number
- Energy = power / time
- Potential difference = current x resistance
- Energy = charge x potential difference
- Power = current^2 x resistance
- Charge = current x time
- Elastic potential energy = ½ x spring constant x extension^2
- Gravitational potential energy = mass x gravitational field strength x change in height
- Density = mass / volume
- Change in thermal energy = mass x specific heat capacity x change in temperature **(this one is on the equation sheet)**
- Energy required to change state = mass x specific latent heat **(this one is on the equation sheet)**
- **Higher Tier:** Rate from a graph = change in Y / change in X
- **Higher Tier:** Rate from a curve requires you to draw a tangent

Foundation Example Papers and Markschemes			Higher Example Papers and Markschemes		
2018 F Paper	Annotated P1	2018 MS	2018 H paper	Annotated P1	2018 MS
2019 F Paper	Annotated P1	2019 MS	2019 H Paper	Annotated P1	2019 MS
2020 F Paper	Annotated P1	2020 MS	2020 H Paper	Annotated P1	2020 MS

PLC Physics Paper 1 - Mock 1

Topic	Key information related to topic	Sparx Code	Resources/Information related to topic	How well do you understand this topic? RAG		
				Red	Amber	Green
Calculations	Carry out calculations using the equations in the **hints/tips** box above	R322	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.08			
Calculations	Calculate a mean	R414	X			
Energy	Give the energy stores involved when heating, moving objects uphill, stretching elastic	R393	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.01			
Energy	Compare the advantages and disadvantages of methods of storing energy	R606 R996	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.14			
Energy	Explain how we can reduce the amount of carbon dioxide being produced through changes to transportation and how we generate electricity.	R911 R476	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.16			
Energy	Describe the principle of conservation of energy	R606	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.08			
Energy	Explain why energy transfers are not 100% efficient	R666	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.12			
Energy	Explain what is meant by dissipation	R384 R996	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.1			
Energy	Describe how to calculate the extension of an elastic object	R353	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_10.06			
Electricity	Explain how the risk involved with electricity changes with potential difference.	R361	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.12			

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Electricity	Explain how static charge can cause uncharged objects to become charged and attract or repel one another.	R147	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.13			
Electricity	Explain how static charges can lead to sparks	R147	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.13			
Electricity	Describe what is meant by an electric field	R151	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.15			
Electricity	Describe the relationship between electric field strength and distance	R151	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.15			
Electricity	Give the frequency and potential difference of electricity in UK homes	R121	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.11			
Electricity	Describe the difference between electrical conductors and insulators	R959	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.01			
Electricity	Draw symbols for fuses, fixed resistors, thermistors and LDRs	R780	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.06			
Electricity	Describe the resistance properties of filament lamps, fixed resistors and diodes	R959	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.02			
Electricity	Calculate the potential difference of components in series circuits based on the rule that the potential difference is shared	R302	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.04			
Electricity	Describe the colours and functions of wires in a plug	R121	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.11			
Particle Model	Explain the properties of solids, liquids and gases	R252	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_7.01			

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Particle Model	Explain the relationship between temperature and pressure.	R614	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_7.06			
Particle Model	Define temperature (not just hot/cold!)	R614	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_7.01			
Atomic Structure	Describe the process of nuclear fission	R345	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.09			
Atomic Structure	Describe precautions when disposing of radioactive waste	R316	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.06			
Atomic Structure	Explain how to identify alpha, beta and gamma radiation using a geiger counter and different materials	R694	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.03			
Atomic Structure	Explain the relationship between radiation dose and proximity/length of exposure	R316	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.06			
Atomic Structure	Describe the difference between irradiation and contamination	R661	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.06			
Atomic Structure	Identify sources of background radiation	R690	https://www.youtube.com/watch?v=Z7394DMkfQs			
Atomic Structure	Suggest how to reduce the risk of contamination by a radioactive source when handling one	R316	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.06			
Atomic Structure	**Higher Tier:** Calculate the rate of decay of a radioactive source from a half life graph	R905	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_8.05			
Prac - Density	Identify random, systematic and zero errors	R128	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_10.05			

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Prac - Density	Describe how to correct a zero error on a balance **after** the readings have been taken.	R128	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_10.05			
Prac - Density	Identify sources of error and improvements when investigating density	R128	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_10.05			
Prac - Resistance of a length of wire	Describe how to investigate how changing the length of wire affects the resistance	R831	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_10.03			
Prac - Resistance of a length of wire	Describe the relationship between resistance and length of wire when temperature is constant	R831 R779	https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_5.02			