

Unit Code: J249/02
Qual Name: GCSE Physics A (Gateway)
Qual Title: P5-P8 and P9 Foundation

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
1	1ai	1	AO1	P5.1a, P5.1d	Wave Behaviour	This question is about wave properties and electromagnetic waves	<i>Please note: images are not to scale as they may vary in colour, density, shade and size when reproduced using different printers and photocopiers.</i>	Y	Y
1	1aai	1	AO1	P5.1a	Wave Behaviour	This question is about wave properties and electromagnetic waves	<i>Please note: images are not to scale as they may vary in colour, density, shade and size when reproduced using different printers and photocopiers.</i>	Y	Y
1	1aiii	2	AO2	P5.1a+c+d	Wave Behaviour	This question is about wave properties and electromagnetic waves		Y	
1	1bi	1	AO1	P5.1e	Wave Behaviour	This question is about wave properties and electromagnetic waves			
1	1bii	1	AO1	P5.1e	Wave Behaviour	This question is about wave properties and electromagnetic waves			
1	1ci	1	AO1	P5.2c+d	The Electromagnetic Spectrum	This question is about wave properties and electromagnetic waves			
1	1cii	1	AO1	P5.2c+d	The Electromagnetic Spectrum	This question is about wave properties and electromagnetic waves			
1	1ciii	2	AO1	P5.2g	The Electromagnetic Spectrum	This question is about wave properties and electromagnetic waves			
2	1a	2	AO1	P6.1l, P6.2a	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			Y
2	1bi	2	AO2, AO3	P6.1L	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			
2	1bii	2	AO2, AO3	P6.1L	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			
2	1biii	2	AO2, AO3	P6.1L	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			Y
2	1c	2	AO3	P6.1J	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			Y

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
2	1d	2	AO3	P6.1J, I	Radioactive Emissions	This question is about a radioactivity experiment investigating the absorption of different types of radiation			Y
3	1ai	2	AO2	P7.2d, P2.2o	Power and Efficiency	This question is about the efficiency of an electric motor		Y	
3	1aii	1	AO3	P7.2d	Power and Efficiency	This question is about the efficiency of an electric motor			
3	1aiii	1	AO3	P7.2d	Power and Efficiency	This question is about the efficiency of an electric motor		Y	
3	1aiv	1	AO1	P7.2b	Power and Efficiency	This question is about the efficiency of an electric motor			
3	1av	1	AO2	P7.2b	Power and Efficiency	This question is about the efficiency of an electric motor			
3	1b	3	AO1, AO2	P7.2d	Power and Efficiency	This question is about the efficiency of an electric motor		Y	
4	1a	2	AO1	P5.1J, P2.1b	Wave Behaviour	This question is about planning an experiment to measure the speed of sound.			Y
4	1b	1	AO1	P2.1b	Motion	This question is about planning an experiment to measure the speed of sound.			Y
4	1c	1	AO3	P5.1j, P2.1b	Wave Behaviour	This question is about planning an experiment to measure the speed of sound.			Y
5	1a	1	AO1	P8.1e	Thinking distance	This question is about stopping distances		Y	
5	1b	3	AO1, AO2	P8.1d, P8.1e, P2.1b	Thinking distance	This question is about forces and motion		Y	
5	1c	6	AO1, AO2, AO3	P6.1e, p7.1e	Radioactive Emissions	This question is about forces and motion	LoR Question		
6	11a	3	AO1, AO2	P2.3o	Forces in action	This question is about pressure and seatbelts in a car.		Y	
6	1bi	1	AO1	P8.1g, P2.3o	Physics on the move	This question is about pressure and seatbelts in a car.			
6	1bii	1	AO1	P7.1e, P8.1g	Physics on the move	This question is about pressure and seatbelts in a car.			
6	1c	2	AO1, AO2	P8.1g, P2.3o	Physics on the move	This question is about pressure and seatbelts in a car.			
7	1ai	2	AO1, AO2	P8.1a, P8.1c, P8.1e, P2.1h	Physics on the move	This question is about force, mass and acceleration.		Y	

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
7	1aii	3	AO1, AO2	P8.1a, P8.1c, P8.1e, P2.2i	Physics on the move	This question is about force, mass and acceleration.		Y	
8	1ai	1	AO3	P8.2b	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier	Y	
8	1aii	1	AO3	P8.2b	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier	Y	
8	1aiii	2	AO3	P8.2a, P8.2b	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier	Y	
8	1bi	2	AO3	P8.2a, p8.2b	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1bii	2	AO3	P8.2a, P6.2 c/d, 8.2b	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1ci	1	A01	P8.2d	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1cii	1	A01	P8.2d	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1ciii	2	A01	P8.2g, h	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1di	4	AO1, AO2	P8.2b, P3.2m	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier	Y	
8	1dii	1	AO2	P8.1a, P7.2c	Physics on the move	This question is about energy resources to produce electricity	Overlap question with higher tier		
8	1diii	1	AO2	P8.2a	Powering Earth	This question is about energy resources to produce electricity	Overlap question with higher tier		
9	11ai	1	AO2	P7.2g	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid			Y
9	11aii	1	AO3	P7.2g	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid			Y
9	11b	2	AO2	P7.2g	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid		Y	Y
9	11c	1	AO3	P7.2g	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid			Y
9	11d	1	AO3	P7.2g, P7.2f	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid			Y
9	1e	2	AO3	P7.2g	Power and Efficiency	This question is about an experiment investigating the cooling of a liquid			Y
10	1ai	1	AO3	P7.2d, P7.1e	Work done	This question is about an investigation into a bouncing ball			Y
10	1aii	1	AO2	P7.1a	Work done	This question is about an investigation into a bouncing ball			Y

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
10	1b	2	AO3	P7.2d, P7.1e	Work done	This question is about an investigation into a bouncing ball			Y
10	1ci	1	AO1	P7.1c, P7.1e	Work done	This question is about an investigation into a bouncing ball		Y	
10	1cii	2	AO2	P7.1c, P7.1e, P7.1d	Work done	This question is about an investigation into a bouncing ball		Y	
11	1ai	2	AO1	P5.3c, P5.3d	Wave interaction	This question is about light passing through a lens and reflecting from coloured paper.			Y
11	1aii	2	AO1	P5.3c	Wave interaction	This question is about light passing through glass and reflecting from coloured paper.			
11	1b	2	AO2	P5.3e	Wave interaction	This question is about light passing through glass and reflecting from coloured paper.			Y
12	1ai	1	AO1	P8.3d	Beyond Earth	This question is about the hot objects emitting electromagnetic waves.			
12	1aii	1	AO1	P8.3d	Beyond Earth	This question is about the hot objects emitting electromagnetic waves.			
13	1ai	1	AO1	P5.1a	Wave Behaviour	This question is about waves	<i>Please note: images are not to scale as they may vary in colour, density, shade and size when reproduced using different printers and photocopiers.</i>	Y	
13	1aii	1	AO1	P5.1a	Wave Behaviour	This question is about waves	<i>Please note: images are not to scale as they may vary in colour, density, shade and size when reproduced using different printers and photocopiers.</i>	Y	
13	1aiii	1	AO1	P5.1b	Wave Behaviour	This question is about waves			
13	1b	3	AO1, AO2	P5.1d	Wave Behaviour	This question is about waves		Y	
13	1ci	1	AO2	P5.1e	Wave Behaviour	This question is about waves			Y
13	1cii	1	AO1	P5.1g	Wave Behaviour	This question is about waves			Y
13	1ciii	1	AO1	P5.1k	Wave Behaviour	This question is about waves			Y
14	1	6	AO2, AO3	P7.1c+d, P1.2e	Work done	This question is about motion	LoR Question	Y	Y
15	1a	2	AO1	P6.1h, P6.1i	Radioactive Emissions	This question is about changes to atoms.			
15	1b	2	AO1	P6.1e, P6.1d	Radioactive Emissions	This question is about changes to atoms.			

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
16	1a	1	AO1	P6.1j	Radioactive Emissions	This question is about radioactive decay, fission and fusion.		Y	
16	1bi	1	AO2	P6.1j	Radioactive Emissions	This question is about radioactive decay, fission and fusion.			
16	1bii	4	AO3	P6.2b, P6.1j	Radioactive Emissions	This question is about radioactive decay, fission and fusion.			
16	1biii	4	AO1, AO2	P6.1i, P6.1d	Radioactive Emissions	This question is about radioactive decay, fission and fusion.			
16	1ci	1	AO1	P6.2d, P6.2e	Uses and Hazards	This question is about radioactive decay, fission and fusion.			
16	1cii	2	AO2	P8.3c, 6.2d, 6.2e	Uses and Hazards	This question is about radioactive decay, fission and fusion.			
16	1ciii	1	AO1	P8.3c	Beyond Earth	This question is about radioactive decay, fission and fusion.			
16	1d	1	AO2	P6.2d, P8.2a	Uses and Hazards	This question is about radioactive decay, fission and fusion.			
17	1a	3	AO1, AO2	P7.1d	Work done	This question is about electrical power and energy transfer	Overlap question with Higher Tier	Y	
17	1b	3	AO1, AO2	P7.2c, P3.2m	Power and Efficiency	This question is about electrical power and energy transfer	Overlap question with Higher Tier	Y	
18	1a	2	AO2	P8.1e	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier	Y	
18	1bi	1	AO2	P8.1e	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier	Y	
18	1bii	3	AO1, AO2	P8.1d, P8.1e, P2.1h	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier	Y	
18	1ci	1	AO1, AO2	P8.1e	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier		
18	1cii	2	AO2	P8.1e	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier	Y	
18	1d	3	AO2, AO3	P7.1e, P8.1e, P8.1f	Physics on the move	This question is about thinking and braking distances	Overlap question with Higher Tier	Y	
19	1a	1	AO1	8.2a	Powering Earth	This question is about energy resources and domestic electricity			
19	1b	2	AO1	8.2a	Powering Earth	This question is about energy resources and domestic electricity			
19	1c	1	AO1	8.2d	Powering Earth	This question is about energy resources and domestic electricity			
19	1d	4	AO1	8.2i	Powering Earth	This question is about energy resources and domestic electricity			

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
20	1a	1	AO3	6.1d	Radioactive Emissions	This question is about radioactive decay and hazards			Y
20	1bi	2	AO1	6.1j	Radioactive Emissions	This question is about radioactive decay and hazards		Y	
20	1bii	1	AO3	6.1j	Radioactive Emissions	This question is about radioactive decay and hazards		Y	
20	1ci	2	AO3	6.1j	Radioactive Emissions	This question is about radioactive decay and hazards			
20	1cii	1	AO3	6.1j	Radioactive Emissions	This question is about radioactive decay and hazards		Y	
20	1d	4	AO2, AO3	6.2a	Uses and Hazards	This question is about radioactive decay and hazards			Y
21	1a	1	AO1	8.3c,e	Beyond Earth	This question is about the solar system			
21	1b	1	AO1	8.3c,e	Beyond Earth	This question is about the solar system			
21	1c	5	AO1, AO2	8.3c,e	Beyond Earth	This question is about the solar system	Synoptic links with forces	Y	
21	1d	1	AO2	8.3c,e	Beyond Earth	This question is about the solar system			
22	1a	1	AO3	7.1a, c	Work Done	This question is about energy transfers.			
22	1b	1	AO2	7.1a, c	Work Done	This question is about energy transfers.			
22	1c	2	AO1, AO2	7.1d	Work Done	This question is about energy transfers.		Y	
22	1di	2	AO2	7.1d	Work Done	This question is about energy transfers.		Y	
22	1dii	2	AO2	7.2a	Power and Efficiency	This question is about energy transfers.			
23	1a	1	AO1	7.1d,e	Work Done	This question is about energy transfers		Y	
23	1b	1	AO3	7.1d,e	Work Done	This question is about energy transfers			
23	1c	3	AO3	7.1d,e	Work Done	This question is about energy transfers			Y
23	1di	2	AO2	7.1d,e 7.2a,d	Work Done	This question is about energy transfers		Y	Y
23	1dii	1	AO2	7.2f	Power and Efficiency	This question is about energy transfers			
23	1e	2	AO2	7.1a	Work Done	This question is about energy transfers			
24	1a	6	AO2, AO3	8.1e,f	Physics on the move	This question is stopping distances	LoR Question		
24	1bi	4	AO1, AO2	8.1i	Physics on the move	This question is stopping distances		Y	
24	1bii	2	AO2	7.1d	Work Done	This question is stopping distances		Y	
24	1c	2	AO1	8.1e	Physics on the move	This question is stopping distances			
25	1a	1	AO2	5.1e	Wave Behaviour	This question is about waves.			
25	1bi	2	AO1	5.1b	Wave Behaviour	This question is about waves.			
25	1bii	3	AO1, AO2	5.1d	Wave Behaviour	This question is about waves.		Y	

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
25	1c	3	AO1, AO2	5.1g	Wave Behaviour	This question is about waves.			
25	1d	3	AO1, AO2	5.1g, 5.2g,h	Wave Behaviour	This question is about waves.			
26	1a	2	AO3	7.1d	Work Done	This question is about the energy transfer on a rollercoaster.	Overlap with higher tier	Y	
26	1b	2	AO3	7.2f	Power and Efficiency	This question is about energy resources to produce electricity	Overlap with higher tier		
27	1	1	AO1	5.2d	The Electromagnetic Spectrum				
27	2	1	AO1	5.1b	Wave Behaviour				
27	3	1	AO1	5.2c	The Electromagnetic Spectrum				
27	4	1	AO1	5.2f	The Electromagnetic Spectrum				
27	5	1	AO1	5.3c	Wave Interaction				
27	6	1	AO1	5.2g,h	The Electromagnetic Spectrum				
27	7	1	AO1	5.1g	Wave Behaviour				Y
27	8	1	AO1	5.2a,b	The Electromagnetic Spectrum				
27	9	1	AO1	5.1j	Wave Behaviour				Y
27	10	1	AO2	5.1g	Wave Behaviour				Y
27	11	1	AO2	5.2g	The Electromagnetic Spectrum			Y	Y
27	12	1	AO1	5.1j	Wave Behaviour				Y
27	13	1	AO1	5.2f	The Electromagnetic Spectrum				
27	14	1	AO1	5.2c	The Electromagnetic Spectrum				
27	15	1	AO1	5.3c	Wave Interaction				Y
27	16	1	AO1	5.2g	The Electromagnetic Spectrum				
27	17	1	AO2	5.1f	Wave Behaviour				
27	18	1	AO1	5.2b,g	The Electromagnetic Spectrum				
28	1	1	AO2	6.1a	Radioactive Emissions				
28	2	1	AO1	6.1j	Radioactive Emissions				
28	3	1	AO1	6.1a	Radioactive Emissions				
28	4	1	AO2	6.1g	Radioactive Emissions				
28	5	1	AO1	6.1g	Radioactive Emissions			Y	

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required	Additional Notes/Comments	Maths	Practical Assessment
29	1	1	AO2	7.2g	Power and Efficiency				
29	2	1	AO2	7.2d	Power and Efficiency			Y	
29	3	1	AO2	7.1e	Work done			Y	
29	4	1	AO2	7.1c	Work done			Y	Y
29	5	1	AO2	7.2d	Power and Efficiency				
29	6	1	AO2	7.1c	Work done			Y	
29	7	1	AO2	7.1e	Work done			Y	
29	8	1	AO2	7.2d	Power and Efficiency			Y	
29	9	1	AO2	7.1e	Work done			Y	
30	1	1	AO1	8.2g	Powering Earth				
30	2	1	AO1	8.3c	Beyond Earth				
30	3	1	AO1	8.3b	Beyond Earth				
30	4	1	AO1	8.1d	Physics on the move				
30	5	1	AO1	8.2e	Powering Earth				
30	6	1	AO1	8.1a	Physics on the move				
30	7	1	AO2	8.1a	Physics on the move			Y	Y
30	8	1	AO2	8.3e	Beyond Earth				
30	9	1	AO1	8.2g	Powering Earth				
30	10	1	AO1	8.2h	Powering Earth				
30	11	1	AO1	8.2c,k	Powering Earth				
30	12	1	AO2	8.1i	Physics on the move			Y	
30	13	1	AO2	8.2d	Powering Earth			Y	