

2026 AQA A-Level Physics Paper 1

Wednesday 20th May 2026 PM

[Paper 2 collaborative ms](#) [Here](#)

yh we (got) cooked 700

Some parts of questions haven't been found yet, pls dont just spectate. Anything highlighted orange may be incorrect (e.g. specific values or pieces of info that people have said may not be right)

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Marks per question: - wrote down in my calculator before leaving the exam

Q1: 2,2,2,1,1 (8)

Q2: 1,3,2,2,2 (10)

Q3: 1,2,4,2,3 (12)

Q4: 1,3,1,4,2 (11)

Q5: 2,3 (5)

Q6: 2,2,3,5,2 (14)

MCQ: 25 (29.4%)

[Component boundaries for previous years](#)

Year	Grade	Paper 1	Paper 2	Paper 3	Total
		Raw Mark /85	Raw Mark /85	Mean Raw Mark /80	Mean Raw Mark /250
2025	A*	63	61	59.4	184.4
	A	53	50	48.8	151.8
	B	44	41	40.2	126.2

2024	A*	60	55	58.0	173.0
	A	49	41	47.8	137.8
	B	41	33	38.2	114.2
2023	A*	59	54	52.0	165.0
	A	48	42	41.2	131.2
	B	40	34	33.6	108.6

Q1		
Question	Marks	Answer
1.1 Simple model for nitrogen	2	7 protons 10 neutrons (1) 7 electrons(1)
1.2 Force in beta minus decay	2	Weak (1) As there is change in quark structure or beta minus or both leptons and hadrons involved (1)
1.3 Force in stable nuclei	2	Strong nuclear force (1) Balance em repulsion between protons, repulsive up to 0.5fm, attractive 0.5-3fm (1) Acts on hadrons??
1.4 Particles	1	electron, electron antineutrino (1)
1.5 Baryon produced and stability	1	Proton produced, most stable baryon (1)
Q2		
Question	Marks	Answer
2.1 Definition of 5.01eV work function.	1	5.01 eV is the minimum energy required to separate bond between electron and metal (1) 5.01eV is the minimum amount of energy required to cause the release of an electron from the surface of the material (1)
2.2 Threshold frequency and base SI unit	3	[Working out] (1) 1.21×10^{15} (1) s^{-1} (1)
2.3 Why is there a threshold	2	Minimum photon frequency

frequency?		required (1) To produce enough energy to liberate an electron (1) $e=hf$
2.4 What happens to angle if incident photon frequency > threshold frequency when rod is positive	2	Theta increases (1) The rod becomes more positive as electrons are emitted from the rod surface because electrons are negatively charged, thus the rod and leaf repel as they have a like charge. (1) Commentary: wasn't the leaf negatively charged ? - no it has the same charge as the rod (think static) See I've seen both negative and positive on forums (i used positive personally)
2.5 Other 2 observation to prove particle nature	2	Two from: - Rate of emission of photoelectrons is dependent on light intensity indicating a 1-1 interaction - Instantaneous no time lag - E_{kMax} is dependent on frequency, not intensity - Increasing intensity increases current, not E_{kMax}

Q3

Question	Marks	Answer
3.1 Define the principle of moment	1	When object is in (rotational) equilibrium, sum of clockwise moments = anti-clockwise moments, around the same point (1)
Is the centre of mass of the	3	[Working out] (2)

plank at the geometric centre of the plank?, $d=1.22$. Weight of rod = 912N. Mass of person = 75kg. Length of rod = (2-3m?)		No, the centre of mass is not at geometric centre. (1) Commentary on methods: i got 930N and 300 and sommin N No 933N not equal to 303N or sommin. Rod would rotate clockwise if modelled as uniform or you could assume that the rod is uniform and then see that the principle of moments would be violated. B is the pivot and calculate wait so is 531 / 296N right? wrong buddy omg i just divided the overall length of the bar and midpoint was 1.37 which 1.22 is less than 1.37 so therefore bar is not uniform. i let x be the distance from B to the centre of mass and $x=0.9$. $1.22+0.9 = 2.12$ m ohh i think i added 0.9 but i forgot
Q4		
Question	Marks	Answer
What makes single slit interference different from double slit?	1	Single slit has a central maximum which is double the width of any other maxima. (1)
Comparing Fringe spacing, could student have only increased wavelength to achieve new wave pattern	2	Commentary: Width of central maxima proportional to wavelength, so new wavelength = old wavelength * new maxima width / old maxima width > 750nm hence not visible

What independent changes needed	4	Change 1 (1) Explanation for change 1 (1) Change 2 (1) Explanation for change 2 (1) Two from: - Decrease slit width (s): More angular spreading of waves. (2) - Increase distance from source to screen (D): Same angle of diffraction but larger distances on screen due to geometry. (2) Commentary: Doubles D? half s (sin theta = lambda / slit separation) Doubles wavelength? - wont work as stated in previous q. I said decrease slit spacing so greater theta of diffraction :3
Calculate slit spacing, 13 fringes, 8.2cm	3	13 fringes, so therefore 12 fringe spacings (1) Screen width = $8.2 \times 10^{-2} \text{m}$, therefore fringe spacing = $\frac{8.2 \times 10^{-2}}{12} = 6.833 \times 10^{-3} \text{m}$ (1) Uses $s = \frac{\lambda D}{w}$ to get $s = \frac{1.5 \times (570 \times 10^{-9})}{6.833 \times 10^{-3}}$ $s = 1.25 \times 10^{-4} \text{m}$ (1) Commentary: 13 fringes, so 12 fringe separations over 8.2cm $0.082 / 12 = w$ $s = (570 \times 10^{-9} \times 1.5) / (0.082 / 12) = 1.25 \times 10^{-4} \text{m}$ 1 mark (12 separations) 1 mark correct fringe separation for their number of separations (ecf) 1 mark answer correct

Why single slit used?	2	Ensures waves entering double slit are coherent (1) Coherent waves must have the same frequency and a constant phase difference (1)
Total current, L_2 is $1.9\text{k}\Omega$, $\mathcal{E}=5.8\text{v}$	2	$R_{\text{thermistor}} = 13456\Omega$ [Working out] (1) $3.5 \times 10^{-3}?$ (unit?) (1)
Voltage across L_1 and L_2 , which is closer to working voltage of 5.8v	3	[Working out] (1) $L_1 = 5.02$ $L_2=0.78$ (1) L_1 is closer (1) Comments: I got otherway round L_1 is the whichever was thermistor

Q5

Question	Marks	Answer
Show max speed is 2.9ms^{-1}	2	[Working out] (2)
Show length of pendulum is 2.6m	2	[Working out] (2)
Graph of gpe and total energy	3	[Working out] (1) GPE never reaches 0. If relative, it would, but the swing always has $\text{GPE} = mg\Delta h$ Curve P for GPE (1) Horizontal line Q (at around 305J as this is the vector of the two curves) (1)
Maximum safe weight of swing $d = 10\text{mm}$ 2.5GPa $v_{\text{max}} = 2.9 \text{ m/s}$ $2.6\text{m}/2.63\text{m}$	5 This is a confusing one!	Correct conversion to base SI (1) Correct use of $YM = \frac{FL}{\Delta LA}$ USING MAXIMUM STRAIN OF 1% (2) Correct use of

		$T = mg + \frac{mv^2}{r} \text{ (1)}$ Safe weight within range & justification (1) justification ecf in places? 1478N
What happens to T if position of centre of mass is higher	2	Radius, r, / Length of pendulum, l, decreases and $T = 2\pi \times \sqrt{\frac{mr}{F}} \text{ (1)}$ OR Radius, r, / Length of pendulum, l, decreases and $T \propto \sqrt{r} \text{ (1)}$ Therefore shorter time period, T (1)

Q6

Question	Marks	Answer
Draw the arrow representing the weight of the person	1	Arrow vertically down from the geometric centre of person (1)
What was T_2 and θ ?	4	[Working out] (1) $T_2 = 666 \text{ (3 s.f. (not 668???)) / } 670\text{N (2s.f.) (1)}$ [Working out] (1) $\theta = 53.8^\circ \text{ (3s.f.) / } 54^\circ \text{ (2s.f.) (1)}$
How T_2 changes when trees bend inwards	2	θ increases (1) $T_1 \sin \theta_1 + T_2 \sin \theta_2 = mg$ Therefore T_2 must decrease (1) Commentary: Decrease as vertical component and theta decrease, (vertical component constant)???? this means $\sin \theta$ increase, therefore T_2 must decrease. Theta increases

		therefore T2 decreases.
MCQ		
Question	Marks	Answer
1. $K^+ \rightarrow X + \pi^0$	1	B: $u\bar{d}$
2. Resistors that give the highest current.	1	C: Circuit with two branches in parallel, each with two cells. Commentary: <i>I believe C gave current of I and others gave $\frac{1}{4}I$ - maybe C? what is c? two cell in series in parallel with another two cell in series, why is it not 4 cells in parallel - i got this, bc internal r will be $\frac{1}{4}$, emf is just one unit, giving 4I if ignore the external R</i>
3. Hypothesis of anti neutrino in beta minus decay	1	Excess energy
5. Uncertainty graph	1	6%
4. Base SI unit of Ω	1	JsC^{-2}
5. Muon decay	1	C Commentary: Conserves charge, electron lepton & muon electron number got C but not sure Forgot which on was either B or C pretty sure
6. Dispersion, which one is significant/negligible?	1	Material significant/Modal insignificant Commentary: Material significant (due to white light/non-monochromatic light used), modal not significant (due to travelling along normal so one path

		difference between rays)
7. Trolley on a ramp attached to a mass using rope and frictionless pulley. What is Ke of trolley? Δh of masses= 0.2m Mass(trolley)= 0.85 kg Mass(masses)= 0.65 kg	1	$\Delta GPE = mg\Delta h$ $\Delta KE = -mg\Delta h$ $mg\Delta h = 0.65 \times 9.81 \times 0.2 = 1.2753J$ $\Delta KE = 1.2753J$ Commentary: change in mgh = $\frac{1}{2}mv^2$ 1.73J or 1.28J?, 0.72J for ek of trolley
8. IV graph	1	$R = 1\Omega$ when $P = 2.5mW$
9. Greatest velocity from spring extension, x is the extension	1	$B \ m = 5g, x = 0.15m$ $F = k\Delta L$ $E = 0.5F\Delta L$ $E = 0.5k(\Delta L)^2$ $KE = 0.5mv^2$ $0.5k(\Delta L)^2 = 0.5mv^2$ $v = \sqrt{\frac{k(\Delta L)^2}{m}}$ $v \propto \frac{\Delta L}{\sqrt{m}}$
10. 2 gliders collides, each with v_1, v_2, m_1 and m_2 (values given), what is final direction of motion and speed	1	0.10m/s left
11. Average speed and time of a car accelerating	1	$v = 36ms^{-1}, t = 40s$ $s = ut + \frac{at^2}{2}$
12. Direction of resultant force of P, which is moving on a horizontally spinning circle	1	Towards centre of circle
13. Magnitude of friction	1	0.069N $F = \frac{mv^2}{r}$ $r = 1 - 0.1 = 0.9m$ $m = 0.025kg$
14. Wavelength, phase difference = $\pi/6$, separation of 1.5mm	1	1.4mm Commentary:

Discussion Area

what is true about a rocket
at its max

yess, been wanting to say the same :(
Does anyone have the paper? cant find it on tiktok:(
if you do find it please do post the link here 🙏

$0.025 = I^2(1)$ current was 1.5 i kinda forgot icl dont think it was the ohmic one because it
has to pass through origin
i also got 0.025 answer, because both points = 1.5.
I think I Got D for that questiikn
Anyone find the multiplr vchoice hard af compared to usual ? Yes Some of them were alright
Not allot of maths on multiple cjoicr, just allot of weird thinking questions In it

idk i thought MC was kinda easy
Fair I guess
Mechanics was blessed
Tree question w
I fucked the max weight because i used length as velocity and vice versa ???????
Wait... is this for girl on chair question

Yeah I fucked that I got 1960N hopefully I get 3 marks i got the same but i didnt realise that
you had to divide by 2 as there are 2 rods
Yeah i got 2000N
same, hoping for 3 marks. because you'd have to minus the centripetal force too, 1900
would be beyond the safe weight. And the answer's 14 smth to 1500? I did not calculate the
force it was a SHM question, didnt even think about that but you seem correct i think
Just by hearing what everyone did in my class who has predictions of A^* ...
which is roughly 200kg but seems a lot tbh
I got 1586N - i put 1500N tho. but i think it was 1475ish
I got majority D altogether

also multiple choice on the same question??

Wait so guys if we managed to get 1900, how many marks would we gain from
2 or 3 i thinkthat?
#Must be 3 would be criminal to give 2 for that jmm
I need A*AA D:
Icl i came out of the test feeling good but after looking at the answers maybe not so much
Imaooo

Lol I'm hoping for A atleast

Yeah I feel like im gettinf around 55 marks maybe bit less

same for me ngl i am getting 55 max please may grade boundary be 53. i thought it is easier but then i think it is harder now.

Is it just me or was this years test harder than last year? cuz i got ppl saying this year was easier??? I thought last years one was excellent!!

I hated last year's ngl

Paper 2 is gonna come in clutch guys trust, its gonna have all the maths questions we love

Bro im cooked for paper 2

Paper 2 gunno be impossible

can't wait, especially for P3 (may be horrid

Ibr, paper 1 is meant to be my good paper, but after that questions of how the angle doesn't change just cuz the electrons are attracted back towards the plate, i feel stupid for saying that the angle increases...

Wtf I said angle increases as well, cause electrons have more K_e or sommin

angle does increase when positive, google agreed but i explained mine wrong

I said that the angle increases since electrons leaving will make teh gold more positive, then this repels the positively charged plate. But since the plate is positviely charged, any photoelectrons released will be at tractedba

No way thatd the answer

yk for the force and angle question, why couldn't u of used a diagram to scale to work out?, cuz it said that the diagram was not to scale.. I mean as if i drew the diagram to scale as a closed triangle , ohhh. I get what u mean now. Hmmm, maybe im not sure but i dont see why not?? yh because that what i did , i can see the other way of doing it but no why this way would be wr

So is this the tree question, I got 660N or sommin and 53 degrees , why did they only give $\frac{1}{4}$ of the page 😭. Had to do simultaneous equations it was meh. I feel sorry for the people in my class who don't do maths 😭😭😭 i can't beleive people do this without doing maths 😂 fr Some people got some crazy subject choices in my school like psychology, sport and then physics 😭😭😭 nahhh wtf 😂😂 now that one i ain't seen

Who tf just corrected my grammer 😂😂😂 lmaoooo ummm no comment, its still wrong lol just less wrong 😂😂😂 yeah I got a 4 in English i got 5 in lit cuz i wrote about the wrong birling and compared the poem to 2 not 1 lol, why do I know more than 3 people who compared the wrong birling haha i started on the other one and changed my mind because i thought it other birling, i knew fuckall quotes bro I got a predicted 8 in English our GCSEs sre gone we should now focus on a levels coz we are cooked 😂 ong necessarily yhh . literally 😂 thats okay, it's why we take physics as an alevel instead of english... yea

If its positively charged it can still have electrons, just net more protons than electrons, so more electrons release making it more positively charged therefore angle increases. yess i also said that when electrons fully escape, angle increases because the positive charge is stronger and it would repel the golden leaf more. Thats exactly what i put as well, but i asked ai and ppl on student room says it wont change, but it does make sense, Just a bit annoyin of how the answer is yk... hopefully we'll get marks for it... Ragebait so was it increase? No it stays the same, well it hasnt been confirmed but i think it does (im going based off ai, so i rlly hope its wrong) i searched it on google and it said for a positive charged rod it increases angle . That would be really evil if angle stays the same..

I rlly hope that the markscheme is nice, cuz thats such a stupid question

I just feeling like mcq let me down i normally get like 20+ feel like ima be lucky to get 12+

I think we are missing some MCQs!!!!!!they should be 25

hmmm... trying to remember them all quite difficult lol

Idek why im still here, got an exam tmrw afternoon ffs gl im just here for the rest of the answers bro go study1!!!!!!

thxw

i give up, revised from after physics til 8 what exam is tomorrow? Further maths

Rip yup gg IM BEGGING GB are low

tBROooooooo that is so hard!!!!!! yeah tell me about it :c !hink i screwed up paper 1

further mathematicians dont sleep too much stress ldk go for a walk take some fresh air but you have to go to bed unless you want to be up blank or sleep in for the exam!

ill prolly sleep at 2am again, wake up 9 and revise more

.I did it for physics tbf

i dont know how youdo that i cut my nails haf a week ago so that they are the perfect length by today

prime snack?

???????????? perfect time to chew them mid exam trust hahahahaha

guys i am cooked nahhhh i got friends who didnt even answer the max weight q

how tf did you work out the mcq for the phase difference of $\pi/6$ to be 1.4mm - anybody got a solution that they could explain mathematically? so u know phase difference is $\pi/6$, it could either be in the same wavelength or they could be $13\pi/12$ apart. $1.5\text{mm} = 13\pi/12$ so u need to find 2π . Divide 1.5mm by $13/12$. how do you get $13\pi/12$ - why cant you use the equation that is $2\pi * 1.5/\lambda = \pi/6$ and solve for λ to get 18mm - phase difference equation? its the one you use for phase difference, you get the distance between two of the same points over the wavelength and multiply it by 2π to get its phase cycle and it gives you phase difference, you can use it to find wavelength? - i thought 9mm was right because it might be a bait question about first harmonic where $L = \lambda/2$. the answer was definitely 1.4mm i put it through gpt 5.5 but i didnt really understand, it used path difference in its solution.

also why is it mcq for the significance of the neutrino about conservation of energy rather than conservation of lepton number as correct answer; why can it be both?u just have to know it sadly. They didnt really know much about lepton numbers and conservation i believe conservation laws about leptons are true, but it was not how neutrinos were found. Scientists first realised there was an energy gap between the neutrin/ proton before and after the interaction.

originally when beta minus decay was analysed, there was a missing part of energy and scientists speculated

thought it was bait question and conservation of energy was too obvious – how did they conserve lepton number before then?? probably not on the spec i gues ;/

ok good because i made that answer

yeah u might be cooked 😭

bro i guessed all the mcqs, i had no time :(:(

for the first mcq is strangeness not conserved?

no because it's weak interaction

fml

magnitude and direction of force, no air resistance

was it constant direction and force??? I put that

because it was in free fall so only force was weight ? (No air res)

Would i get 1 mark for saying the single slit allow the light source enter the double slit in the same time?

Probably not bc without the single slit that would happen anyway

grade boundary predictions anyone??? what r u predicting, people are saying paper was so easy, but idk. found it hard ngl

Do you think it was easier or harder than last year's? easier

a bit easier i think

What grade are you

why

im scared cuz a lot of people said it was okay as opposed to usually saying it was bad - think its a bit easier than usually but im scared thell go beast mode on paper 2

2017: 145

2018: 147

2019: 170

2023: 133

2024: 13

2025: 148

What are these???????????????????? A grade threshold

for what grade? is it overall or only on paper 1? average between all 3

what happen

i think it is quokka, because they kept deleting bits at the bottom. Then highlighted the whole doc
their colour and also name anonymous quokka isabeli 😊 Is this T?
hello

o you can type and still see my text but it looks different?? They edited it so u cant delete i think? or u can only add ur own

i cant add stuff

what was the mass for the 3rd harmonic again; i forgot that q existed i got dementia after the exam i had it in my calc but its gone, all i remember is it was to the power of -4 and i think one of the last 2 options either c or d, yes i did i did $f = \frac{v}{2l} \sqrt{\frac{T}{\mu}}$ yes, i forgot i swear it started w 2 tho noo i think it was in 20s but idk if im tricking myself
yes i got λ^{-4} .

did u guys just divide 3rd harmonic by 3 then use the f formula
then μ times by length? perff ty pookie

rtsmmes he aqrwl4 q/rt a2or 4 in the equation?
whats the tension? hmm was it not like 25 that might be totally wrong soz- g
Length was 1.8m, frequency was like 75Hz so third harmonic = 25Hz = $\frac{1}{2l} \sqrt{\frac{T}{\mu}}$
has anyone approx worked out what they got in total?
larp 74
there isnt all the questions yet - which one we not included?

was there one with the $hf = \phi + e k_{max}$ equation?
it was $hf_0 = \phi$, solve for f_0 .
multiple choice question about the true statement? what true statement? when max velocity?
i think something about which work function was greater? But i rearranged into $y = mx + c$
wait nvm this was an emf question the V_t one I v graph?
oh this was that uncertainty question ^^^^ ohhh 6%?
Ye i got that

did anyone do a closed triangle for the palmtree wires one? yhh i did, what'd u get if u did it this way?
no
no
completely messed that 1 up, havent done somethign like that for a while and just assumed $\theta = 75$ to not waste time for mcq
i was genuinely pulling stuff out of thin air for that question ngl

bro i made so many silly mistakes its a joke
like i rounded up from 1960 to 2000 instead of rounding down to 1900

DOES ANYONE HAVE ANY PREDICTED BOUNDARIES??? SURELY A LOT OF PEOPLE FOUND IT HARD? AFTER ALL IT IS PHYSICS probabably the exact same as last year prob 56 for an A?idk (@rdakotaholmes on snap: See boundaries for previous years at top. i think they will be around 60/61 for an A* personally. it seemed mid)

does anyone rmb rest of the q?

lwk i think that people thought this paper was light when walking out the exam and talking to others like i know a guy whos predicted a star and he felt confident checked the mark schemes and ideas and he really doesnt feel confident now
2025A* 63

icl ppl thought i was cooking on this paper, definitely not now 💔 paper 2 lock in commences now

paper 2 gunno be so bad

bru i thought i did good on this paper and i made some mistakes ughhh, and im retaking this fucking shite subject. Also, i was kinda hoping this paper was gonna be more mathsy than wordy.... apparently not, gotta lock in for p2 and P3 (I HATE P3)

@rdakotaholmes on snap Did the swing definitely have two rods?? I feel like I specifically remember it having one rod??

Question - you guys know the multiple choice question for direction and magnitude of force, what did u all say? and for angle of theta bro i fucking placed it decreased.... and my dumbass ahh divided by 10 for the fringe spacing, there wasnt just 11 minimas right?

AND CAN I CLUTCH UP BY P2 AND P3??? or

RH: is that for the rocket question?? Also Lowkey skipped the angle of theta question because i forgot whether fringe spacing was maximum-> minimum spacing or maximum to maximum and forgot to com back to it. It did say there were 13 maxima right???Yes

im cooked i need to bang out on p2 p3 to increase my average now:(

@rdakotaholmes on snap: Real. actually idk. i feel like we are all doubting ourselves a bit too much. im sure if youre anything like me you will do way better than you predict.

idk will just have to wait n see . Hope for th best

@rdakotaholmes on snap SO scared for august ngl. Next paper is literally physics p2 so i am not getting a break from physics in between. Hoping for the best for u too gang!!

ty boss

Grade boundaries predictions? 56 for an A? – have a look at top of doc. personally i reckon it will be ~52-53 for A (@rdakotaholmes on snap)

WE SHOULD PROBABLY FIX QUESTION ORDER
wdym??

 2026 Aqa physics paper 2 Unofficial ms