Leaving Certificate Physics Committee Convenor's Report 2021

Opinions on these papers are based on discussions held by members of our Association around the country. Reports were collated and discussed by the convenor of a committee of experienced teachers of Leaving Certificate Physics, elected by members of the ISTA.

Higher Level

General comments. The ISTA welcomes this examination paper. Students were given great choice on the topics that were covered by the questions. Each question focused more on a specific topic than in past years where a single question could have covered a number of topics. This should help students who may have not covered the entire course. Students with a reasonable amount of work done should have been able to pick at least six questions (from the 14 offered) to suit them in spite of the various challenges that they faced during the past two years. The exam was a reasonable exam for students challenged by physics and appropriately testing for those seeking higher grades. The extensive use of STS as usual was welcome.

Section A

Students had to complete two out of five questions which afforded great choice to the candidates.

Question 1: This is straightforward but the term 'fixed point of suspension' may cause confusion. Perhaps a term like the point from the pendulum was suspended may have been clearer.

Question 2: Another straightforward question. We were glad to see that students did not have to draw a graph of the data and were only asked to sketch a graph that may be used to calculate the focal length.

Question 3-5: All straightforward questions for a student who had made a reasonable amount or preparation.

Section B

A great choice of 8 out of 12 questions.

Question 6

(f) Some students may get mixed up between second harmonic and second overtone. We hope that students who incorrectly draw the second overtone will be awarded at least 4 marks.

(i) We hope that students giving examples of where each of earthling and bonding is used will be accepted to distinguish between both terms.

Question 7: A reasonable question on mechanics. The initial assessment of principles and laws gives students a hint on how to approach the question. However, the question is appropriately challenging.

Question 8: A straightforward question on the wave nature of light.

Question 9: A challenging but reasonable question. We assume that some students will not realise that the question gives information on 'heat capacity' and not specific heat capacity of the food.

Question 10: Another reasonable question.

Question 11: Reasonable but sufficiently testing.

Question 12: A reasonable question.

(iii) We assume that many students may stop calculations after calculating the permittivity and not continue to find the relative permittivity.

Question 13

1. (iv) Student may be unfamiliar with the nuclear symbol for an antiproton. We hope that a ***p bar*** symbol will be sufficient.

14 (c) Even though the question states that ***I*** was the light intensity some students took the symbol I as photocurrent.

Ordinary level

General comments: The questions are well constructed to guide the student on how to progress through the question. Students understanding was helped with the use of appropriate diagrams. Since exam questions are used by students during their learning over the two years of the course, the use of STS here reinforces how useful physics is in everyday lives and maintains student interest.

Section A

Questions are very clear and students are guided to the solution. Again since the choice was to pick two questions from 5 there was plenty of choice.

Section B

A great selection for students from right across the course.

Question 6: A choice of 8 out of 12 is a very generous selection.

Question 7: As usual the question applied physics to everyday life. However, we think that not many candidates will successfully answer the question ii) Explain why Newton's second law of motion is consistent with the principle of conservation of momentum. This will would be more in line with a higher-level question.

Question 8-14: A good selection of topics with reasonable questions

Seán Finn

(Convenor of the ISTA Physics Committee)