# Examiners' Report
# Principal Examiner Feedback

# January  2019

Pearson Edexcel International Advanced Level

In Biology (WBI01)

Lifestyle, Transport , Genes and Health

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**Introduction:**

This paper tested the knowledge and understanding of the two AS topics: 'Lifestyle, health and risk' and 'Genes and health', together with elements of How Science Works. The range of questions provided plenty of opportunity for candidates to demonstrate their grasp of these AS topics.  Overall, candidates coped extremely well with this paper, finding most of the questions straightforward to tackle; there were very few examples of questions not being attempted at all, with all questions achieving the full spread of marks.

It was good to see how well many candidates could recall several areas of the specification in a good level of detail, particularly the QWC questions. It was also very pleasing to see few candidates losing marks for poor quality of written communication (QWC) with answers often set out in a logical style with good expression of clarity.

Some candidates let themselves down by not reading the questions carefully enough, or by providing a response without the detail required at this level.

It was also noted that several candidates simply wrote everything they knew about a given topic, therefore wasting time. It is suggested that candidates look carefully at the maximum number of marks available for each question and structure their answers accordingly.

Many candidates have clearly made good use of past papers and mark schemes, but it is important for candidates to understand the scientific principles covered in the specification, so they can apply them to new contexts and not write a rehearsed answer to a question that has been asked in the past.

**Question 1(b)**

The majority of the candidates were able to complete this without a struggle. A handful had not read the question carefully and started stating the differences in bases.

**Question 1(c)(i)**

A simple percentage calculation that most pupils were able to achieve. A very clear question involving basic mathematical skills. Only several candidates selected the saturated fats however, were still awarded 1 mark for a correct calculation.

**Question 1(c)(ii)**

Expectations of full marks were let down by the inability to think in simple terms. Many candidates overcomplicated the question and ended up coming to the conclusion that different coconuts have different quantities of fatty acids (which was already stated in the question).

**Question 2(b)**

There were a handful of candidates that were confident when answering this question demonstrating good knowledge in the cardiac cycle. A few students were very weak in terms of the cardiac cycle and referred to blood moving from the ventricle to atria. Many were able to obtain Mp1 however, marks were lost overall as pressure changes was not described.

**Question  2(c)**

The majority of candidates were able to obtain Mp1 as they were confident in the key subject knowledge that the left ventricle wall is thicker hence carrying blood at a higher pressure etc. Having said this not many pupils were able to obtain Mp2. I generally feel that this is not a lack of subject knowledge but the candidates had most probably felt that their description in Mp1 was enough for 2 marks as here they mentioned both lung and body.

**Question 3(c)(i)**

Many candidates were able to obtain either 2 or full marks for this question as the question was very specific as to what it wanted. Mp1 and Mp3 were the most common marks awarded. Not many pupils were able to link the CVD Mp5. A few candidates were also under the impression that the anticoagulant would get rid of a clot('bursts the clot') rather than be a preventative measure.

**Question 3(c)(ii)**

A very well answered question by the majority of candidates.

**Question 4(a)(ii)**

A classic question yet many candidates were only able to obtain Mp1. There seemed to be a lack in knowledge that the environment also plays a part.

**Question 4(b)(ii)**

A question that candidates felt confident with however, many candidates failed to obtain Mp3. They simply circled aa but many did not link it to the phenotype.

**Question 4(c)(i)**

Not many candidates were able to gain full marks for this question. Mp1 and Mp2 were the most common marks awarded. In many occasions it was difficult to award Mp1 due to the way of expression. In most cases Mp3 could not be awarded as the key word cell was not used.

**Question 4(c)(ii)**

This question had a mixed response as it was clear that their own views were coming across in answers. Many were linking their answers to God and social issues.

**Question 5(a)**

Overall a very well answered question by the majority of candidates.

**Question 5(c)**

This was a well answered question by many candidates yet Mp5 was not often awarded. Mp1,2 and 3 were the most commonly awarded points. From then on many pupils began to write about the mucus trapping bacteria etc. This demonstrated that candidates were going off track after the 3rd point and not referring to the specific question at hand.

**Question 6(a)**

A well answered question by many candidates. A handful of candidates were clearly not aware of manipulation (as they had just read off the graph) and another handful was reading incorrectly off the graph when trying to manipulate the data.

**Question 6(b)**

Overall a very well answered by the majority of candidates. This practical has clearly been emphasised as candidates seemed confident when answering this practical question.

## Question 7(a)

This was answered to a good standard by most candidates where they demonstrated good subject knowledge in terms of the lung structure. However Mp8 was not often awarded to candidates as they were not able to link the structural adaptations to an overall increase in diffusion of gases. Most pupils would mention an increase in diffusion rate but not specify what was diffusing.

## Question 7(b)(ii)

Not many candidates were able to achieve full marks for this question. They were not able to use collective key words together therefore many marks were not obtained. Mp2 was difficult to award to candidates as the majority of them did not mention the oxygen concentration gradient. It seemed as if candidates were simply putting together various definitions they had learnt in the past. Candidate responses were not specific enough for this question.

## Question 8(b)

A classic question yet there were several pupils that were unable to determine the correct solute concentration difference in and out of the cell which would have lost them 2 marks. Many candidates would refer to water concentration or osmotic/water potential.

## Question 8(d)

Only a handful was able to gain full marks for this question. Majority of the candidates were only able to give one example, either diffusion **or** active transport.

**Paper Summary:**

In terms of the exam series in general I am finding very similar questions to past papers which can give pupils a bad habit of memorising certain answers. I feel that this prevents candidates from actually reading the question at hand especially international candidates.

Overall I felt that the paper had a great balance in terms of subject knowledge/general content and mathematical skills yet still believe that there could have been more of the 'suggest' type questions which would get candidates applying their knowledge to the questions.