



Examiners' Report/  
Lead Examiner Feedback

Onscreen Test  
Version 6

NQF BTEC Level 1/Level 2 Firsts in  
Engineering

Unit 1: The Engineered World (20526E)

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Summer 2015

Publications Code BF042817

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## Introduction

This report has been written by the Lead Examiner of Unit 1: The Engineering World. It is designed to help you understand how learners performed on this test. The report provides an analysis of learner responses for each question. You will also find example learner responses, with commentary.

The external assessment for this unit is an onscreen, on-demand test. A number of tests are live within the 'test bank' at any one time and learners are allocated tests randomly. It should be noted that this report refers to the third test retired from the live 'test bank'. Whilst not all learners will have sat this particular test, the Lead Examiner's comments provide valuable feedback, relevant across different tests for this unit.

We hope this will help you to prepare learners for the external assessment for this unit.

## Grade Boundaries

### Introducing external assessment

The new suite of 'next generation' NQF BTECs now include an element of external assessment. This external assessment may be a timetabled paper-based examination, an onscreen, on-demand test or a set task conducted under controlled conditions.

### What is a grade boundary?

A grade boundary is where we 'set' the level of achievement required to obtain a certain grade for the externally assessed unit. We set grade boundaries for each grade (Distinction, Merit, Pass and Level 1 fallback).

### Setting grade boundaries

When we set grade boundaries, we look at the performance of every learner who took the assessment. When we can see the full picture of performance, our experts are then able to decide where best to place the grade boundaries – this means that they decide what the lowest possible mark should be for a particular grade.

When our experts set the grade boundaries, they make sure that learners receive grades which reflect their ability. We have awarded grade boundaries for the first time for our new next generation BTECs, so this means that a learner who receives a 'Distinction' grade on a particular test will have similar ability to a learner who has received a 'Distinction' grade on another onscreen test. Awarding grade boundaries is conducted to ensure learners achieve the grade they deserve to achieve, irrespective of variation in the external assessment.

### Variations in externally assessments

Each test we set asks different questions and may assess different parts of the unit content outlined in the specification. It would be unfair to learners if we set the same grade boundaries for each test, because then it wouldn't take into account that a test might be slightly easier or more difficult than any other.

The grade boundaries for the third onscreen, on-demand test to be retired from the test bank are shown below.

Grade	Unclassified	Level 1 Pass	Level 2		
			Pass	Merit	Distinction
Boundary Mark	0	15	24	33	43

## General Comments on the onscreen test

This test is the third external assessment to be retired from the live 'test bank'. The onscreen assessment for this unit has been available on-demand since 13/06/14. Most learners were able to respond effectively to the questions early on in this test. However, some of the later questions were designed to be more challenging and as such, mixed responses were produced. A detailed breakdown of performance against each question is detailed later in this report.

On the whole, learners appeared to be familiar with most of the command verbs in the questions, and were able to use the different mechanisms available to answer the questions, for example, drag and drop, line-matching, missing word drop downs and multiple choice questions.

There were some unexpected gaps in knowledge for some of the very basic engineering principles, with a lack of knowledge of specific processes, such as powder metallurgy, and unfamiliarity with explicit elements of the specification such as the stages of a Life Cycle Assessment (LCA). Some learner responses suggested that learners lack awareness of characteristics and applications of many processes and materials as outlined in the unit specification. It is very important that the whole specification is delivered and learners should be exposed to the full range of engineering processes, engineering materials and sustainable technologies. This is reflected on Page 35 of the Delivery Guide, issued with the specification and available on the website at:

<http://qualifications.pearson.com/en/qualifications/btec-firsts/engineering-2012-nqf.coursematerials.html#filterQuery=Pearson-UK:Category%2FTeaching-and-learning-materials>

From having practical experience of these aspects of the unit, learners will be better placed to apply their knowledge and understanding to the applied situations in the assessment and gain credit for their responses.

The responses to open response questions were on occasion rather minimal and it was clear that a number of learners did not make full use of the stimulus material provided in the question. The emphasis in this assessment is on candidates' application of their knowledge to a variety of practical engineering related situations. Stronger answers to extended response questions should demonstrate application along with theory. It is important for learners to have practice in doing this in their preparation for the assessment. Learners that were able to access higher marks for these questions were able to apply their knowledge and understanding to the stimulus and provide realistic and appropriate suggestions. As Unit 1 is a vocational engineering-related unit, the external assessment seeks to put the learners in applied situations and ask them to respond to these. It is essential that centres stress to learners the need to read the stimulus information carefully before they answer questions, and be prepared to use that information within their responses. Where learners were unable to apply the stimulus in their answer, it restricted the number of marks they were able to access. Generic responses gained limited credit. It is not necessary for learners to have an in-depth knowledge of the different engineering principles in order to answer the questions well, however, an awareness of the basic requirements of how engineering impacts on products and processes is expected.

The external assessment requires some recall of knowledge from the specification and it is important that learners revise to prepare for this assessment. Sample Assessment materials are available on the subject website to support learners' preparation. In addition, this test is one of three that have now been retired from the 'test bank' and are available for download along with associated mark schemes.

Learners appeared to manage their time effectively and appeared to be able to complete the assessment in the time available.

## Question 1

### Targeted Specification Area: Learning Aim A.2/A.4

This question targeted engineering processes and modern production methods.

- a) Most learners were able to answer this question correctly, recognising the video shows a milling operation being carried out.
- b) Most learners were able to answer this question correctly, recognising that automating a conventional machine tool is achieved using CNC.

## Question 2

### Targeted Specification Area: Learning Aim A.1

This question was aimed at matching products to the sectors associated with them. Most learners were able to correctly identify the engineering sectors linked to the Engineers vice and the Multimeter, depicted by the images.

## Question 3

### Targeted Specification Area: Learning Aim A.2

This question tested knowledge of safety glasses/shields.

- a) The majority of learners were able to identify at least one hazard, with many identifying two appropriate hazards.

1 mark example:

Safety glasses are commonly used in workshops.  
They are worn by engineers when carrying out machining operations to protect their eyes from hazards.

(a) State **two** hazards that require an engineer to wear safety glasses when carrying out machining operations.

Type your answers in the boxes.

when cutting metal conduit metal can fly into your eye

protect the users eyes from hot products touching the eye

In the first response the learner has correctly identified what can be considered "flying debris", which is one of the anticipated hazards listed in the mark scheme. The second response however is not appropriate as the danger of hot products getting into the eye would require more substantial protection.

2 mark example:

(a) State **two** hazards that require an engineer to wear safety glasses when carrying out machining operations.

Type your answers in the boxes.

when turning on a lathe they have to watch out for swarf going into there eyes.

When they are drilling they need to watch out for the lubricant going in there eyes when drilling as well as swarf as the lubricant if used could irritate the

This extract, from the learner's responses, identifies two hazards; swarf and lubricants. Both are identified separately in the mark scheme as appropriate responses with lubricant being accepted as an interpretation of chemicals/cutting fluid.

b) Many learners were able to identify a reason for using a safety shield rather than safety glasses. A significant number identified the full face protection and or protection from heat element, suggesting they may have referred to the image as well as carefully reading the question. This is something that is to be encouraged as images/videos help to put questions in context and provide stimulus material for learners.

#### Question 4

##### Targeted Specification Area: Learning Aim C.3

This question targeted lean manufacturing techniques. It proved relatively straightforward for more able learners however it was evident in some responses that learners may not be familiar with the term "inventory" or may not understand the link between poka-yoke and human error. The vast majority of learners did score at least one of the available two marks here.

#### Question 5

##### Targeted Specification Area: Learning Aim A.4

This question targeted the use of industrial robots. It proved very straightforward with many learners able to identify the key disadvantages of using robots in the given application. A few learners did not identify either of the disadvantages, suggesting they may have read the question incorrectly and tried to identify advantages, rather than disadvantages.

#### Question 6

##### Targeted Specification Area: Learning Aim C.2

This question targeted minimising waste production and the use of recycled materials. The question proved somewhat challenging with many learners giving generic environmental responses or focussing on the lightweight nature of plastic materials when compared to traditional girders.

0 mark example:

The image shows assembled bridge girders manufactured from recycled plastic bottles.

Explain one advantage of using recycled plastic material in this application.

Type your answer in the box.

plastic bottles are light so the girders won't be heavy and have much weight to them making it easy to put them in place in assembly.

In this response the learner has identified the potential advantages of using a lightweight material which would not need to be recycled material, therefore not specifically answering the question.

1 mark example:

The image shows assembled bridge girders manufactured from recycled plastic bottles.

Explain **one** advantage of using recycled plastic material in this application.

Type your answer in the box.

It reduces cost of the manufacture of the girders and makes the materials use cheaper as well. By reducing the cost of the materials and processes used to make the girders in this way, the cost of the overall bridge will be less.

In this response the learner has identified that use of recycled material may be cost effective. This point is, effectively, repeated throughout. This question initially rewards learners for identifying an advantage however; the second mark is achieved only if this is extended with an explanation of this advantage in context.

2 mark example:

The image shows assembled bridge girders manufactured from recycled plastic bottles.

Explain **one** advantage of using recycled plastic material in this application.

Type your answer in the box.

It reduces the amount of waste material from previous products which mean that there is less resources that need to be put into landfill.

This response recognises the reduction in waste material for the first mark and extends this (thus achieving a second mark) by explaining that this will be advantageous as a reduction in landfill will result.

## Question 7

### Targeted Specification Area: Learning Aim A.2

This question targeted casting processes.

a) Most learners were able to identify at least one reason for the use of metal tongs the second reason proved more challenging however.

1 mark example:



The image shows metal tongs.  
Metal tongs are used for a variety of operations when sand casting steel



(a) Give **two** reasons why metal tongs are used during the sand casting process.

Type your answers in the boxes.

to protect the worker from buring his hands when he is moving the metal

it wont damage the product when you pick it up with the tongs



In this response the learner has correctly identified that the metal will be hot and the tongs allow it to be handled safely. The second reason is not specific to the use of metal tongs however as other tongs/grips/tools, made from other materials, would also be unlikely to damage the material.

2 mark example:

The image shows metal tongs.  
Metal tongs are used for a variety of operations when sand casting steel



(a) Give **two** reasons why metal tongs are used during the sand casting process.

Type your answers in the boxes.

They keep the workers hands away from the hot molten metal which could burn them.

The metal has a higher boiling point so the tongs aren't melted when coming into contact with the sand casting steel components.

In this response the learner has identified that the tongs will keep the operator at a safe distance and that the tongs will not be damaged/melted when coming into contact with the hot crucible/steel. These are interpretations of the first two exemplar responses in the mark scheme, hence two marks are awarded.

## Question 8

### Targeted Specification Area: Learning Aim C.2

This question targets the reuse of energy/materials to minimise waste production. The question was not answered as well as might have been expected with many generic answers relating to the environment without the link to minimising waste production.

0 mark example:

Rechargeable batteries can be recharged using mains electricity.

Give **two** advantages of recharging batteries when attempting to minimise waste production.

Type your answers in the boxes.

less chemicals made when recycled

Doesnt take too long to charge

In this response neither reason given is a coherent advantage. In the first response no reference is made to recharging, suggesting the learner has misinterpreted the question. The second response is not related to minimising waste production but relates to the time required to charge batteries.

2 mark example:

Rechargeable batteries can be recharged using mains electricity.

Give **two** advantages of recharging batteries when attempting to minimise waste production.

Type your answers in the boxes.

people wont throw them out when they are dead because they can recharge them so this will stop them from ending up in land fills

people will keep them for years becuae they wonmt need to buy new batteries to replace them which will reduce waste of packeting and making new batteries

In the first reason given here the learner has identified the reduction in landfill, through recharging rather than discarding batteries. The second response recognises that less energy is needed for recharging than making new batteries (and associated packaging).

## Question 9

### Targeted Specification Area: Learning Aim C.3

This question targeted lean manufacturing and the use of Kaizen techniques. Most learners were able to identify at least one characteristic whilst more able learners often got both. It appears evident that "continuous improvement" is a phrase most learners associate with Kaizen but recognising this requires "small changes to processes" is less easily linked to Kaizen activities.

## Question 10

### Targeted Specification Area: Learning Aim A.3

This question targeted scales of production. Two explanations were required allowing a total of four marks. As previously noted, with questions in this format, it is anticipated that learners should identify two disadvantages and then extend this to why/how it is a disadvantage. Less able learners were able to identify one or two disadvantages without further expansion, or repeated the same disadvantage twice.

Learners that are more able often identified two disadvantages but often only provided one reasoned extension to this.

2 mark example:

The image shows the mass production of trucks on an assembly line.

Explain **two** disadvantages of using mass production when manufacturing trucks.

Type your answer in the box.

you could be wasting materials and money because they will be sitting in stroage when people dont need them, they will also get damage if they are in stroage for to long because will rust and the wheel will rot if they are just standing still for too long in storage, it will waste money for the company.because they will not be sold if they are ruined and the company will have to make new ones for the clients if they dont have any of them up to standard



In this example the learner has identified that there will be a variety in demand and that this may mean that finished trucks will be in storage, this is extended to indicate the cost implication for the company. Whilst this is an explained disadvantage, there is no second disadvantage identified/explained.

4 mark example:

The image shows the mass production of trucks on an assembly line.

Explain **two** disadvantages of using mass production when manufacturing trucks.

Type your answer in the box.

If there is a mistake and it isn't spotted in the checks then a batch of trucks will go out and these will have to be recalled costing the company money as well as time due to a mistake. If you mass produce these trucks and they aren't selling very effciently then you will have to store the trucks costing you storage money or storage space. Also if you decide to change the the look of the truck on the production line then it's not easy as you will have to change production line lay out and how it works the production line which is risky and expensive and could stop production for a long period of time.

In this response the learner has given one disadvantage by identifying the risk of an error not being spotted, which may have an impact on a large number of trucks. The second disadvantage is the variety in demand, which may mean storage and the associated cost. This learner has also identified a third disadvantage in that production may need to be stopped, costing money, if the production line required remodelling to accommodate changes to the design/appearance of the truck. Where learners provide more than the required number of responses to a question a positive approach to marking is taken with the "best" responses being rewarded.

## Question 11

## Targeted Specification Area: Learning Aim A.2

This question targeted machining techniques and material removal. This question relied on learners recognising or deducing the function of given material removal tools. Some learners seemed unfamiliar with the images and consequently failed to correctly identify either, although many learners did identify both tools correctly and achieved both marks available.

### Question 12

## Targeted Specification Area: Learning Aim B.4

This question targeted new technologies in engineering. Most learners were able to correctly identify that glass is the material used to transmit data in optical fibres.

### Question 13

## Targeted Specification Area: Learning Aim A.2

This question targets electrical/electronic processes and specifically surface mount technology. Most learners were able to identify the correct image in this question.

### Question 14

## Targeted Specification Area: Learning Aim B.1

This question targeted an application of smart materials. Most learners were not able to recognise the specific characteristics of the smart material, shape memory alloy, targeted in this question.

1 mark example:

Arteries carry blood around the body and can get blocked over time.  
The image shows a surgical stent that is used to open narrow arteries.  
Surgical stents can be manufactured using shape memory alloys (SMAs).

Explain **two** advantages of using shape memory alloys for surgical stents.

Type your answer in the box.

memory shape alloys can be moved around and stretched but they always return to their original form therefore it is good to use them in surgical stents as they can be moved around and put into place and they will return to the original shape that they are supposed to be.

memory shape alloys are lightweight and strong giving them a higher strength to weight ratio so that they can withstand a lot of use without breaking.



In this response the learner has identified that the metal will return to its original shape, there is no extension saying why this is an advantage however. The second part of this response refers to very generic properties which could be attributed to a range of materials and is therefore not an appropriate response to this particular question.

3 mark example:

Arteries carry blood around the body and can get blocked over time.  
The image shows a surgical stent that is used to open narrow arteries.  
Surgical stents can be manufactured using shape memory alloys (SMAs).

Explain **two** advantages of using shape memory alloys for surgical stents.

Type your answer in the box.

SMAs are corrosion resistant, meaning the blood and other substances will not weaken their structural integrity and they can last for a long time. Another advantage is when they are forced to change shape by the arteries, they will return to their original shape and prevent blockages.

In this response the learner has identified that the smart material will always try to return to its original shape and the advantage of this is that it will prevent blockages reoccurring, hence two marks being awarded. The learner has also identified that the SMA will last a long time, although corrosion resistance is a somewhat limited reason as an SMA has a range of properties that make it bio-medically compliant, hence only one further mark has been awarded.

## Question 15

### Targeted Specification Area: Learning Aim C.1

This question targeted identification of stages in a life cycle assessment. A large number of learners identified at least one stage of a life cycle assessment however only the more able learners were able to consistently identify both stages, this is somewhat surprising given that this question is direct recall of two stages of life cycle assessment and these are indicated in the specification..

## Question 16

### Targeted Specification Area: Learning Aim C.4

This question targeted hydro energy and the use of wave power. One explained advantages was required for this question. Where learners were awarded marks, they often only identified one feature of wave power, missing the extension required explaining why/how this feature is an advantage.

0 mark example:

Explain **one** advantage of using wave power to generate hydro energy.

Type your answer in the box.

it can produce a lot of energy and that you can store the energy when you are not using it so that it wont go to waste, the energy is also free to make once you have everything set up.

In this response the learner has focussed on being able to store the energy, an incorrect response. Further comments related to the energy being free are not specific to wave power as this would also apply to other forms of hydro energy such as barrages and the use of dams.

1 mark example:

Wave power can be used to generate hydro energy.

Explain **one** advantage of using wave power to generate hydro energy.

Type your answer in the box.

one of advantages is waves on thr sea is always so it produce electriciti always and at the same time it didn't polytr enwiroment. you don't spend a lot of money to made dams but you produce same valeu of energy.

In this response the learner has identified two reasons for using wave power, the lack of pollution and the renewable nature of waves. Only one mark is awardable however as there is no extension explaining why either of these is a specific advantage of the use of wave power to generate hydro electricity.

2 mark example:

Wave power can be used to generate hydro energy.

Explain **one** advantage of using wave power to generate hydro energy.

Type your answer in the box.

It is completely green and produces no polution such as carbon dioxide once manufactured and running. In some locations there can be waves all year round and even at night so energy can be produced for long periods of time. Unlike something like photovoltaic cells which can only work in the day with sun light.

In this response the learner has identified that waves are present all year round, the advantage of this being that energy can be continually produced. As this is an explained advantage two marks were awarded.

## Question 17

### Targeted Specification Area: Learning Aim B.3

This question targeted powder metallurgy and the stage of the process involving mixing/blending of powder. Two explained reasons were anticipated and many learners struggled with this question not seeming to have a clear understanding of the process. Many learners were able to identify one reason, without explaining it. Learners that are more able could often provide a single linked explanation but struggled to identify a second reason for mixing/blending powders.

0 mark example:

The image shows an operator preparing metal powder as part of the powder metallurgy process. One part of the powder metallurgy process is mixing/blending powders.

Explain **two** reasons why powders are mixed/blended as part of the powder metallurgy process. (4)

Type your answer in the box.

One reason why powders are mixed/blended as part of the powder metallurgy process is because they are extremely easier to use when they have been mixed/blended.



No marks were awarded here as the learner has provided a generic response "easier to use" with the remainder of the answer being (essentially) repetition from the question.

2 mark example:

The image shows an operator preparing metal powder as part of the powder metallurgy process. One part of the powder metallurgy process is mixing/blending powders.

Explain **two** reasons why powders are mixed/blended as part of the powder metallurgy process. (4)

Type your answer in the box.

Powders are mixed and blended so when they are sintered they are an alloy. An alloy is a mix of metals and different alloys have different properties. Some are good at corrosion resistance and some are good at strength. Also they are mixed so they can be used for prosthetic limbs, this is why they are light

In this example the learner has identified that mixing powders allows for different properties to be achieved. This is exemplified by strength and corrosion resistance which can be interpreted as service requirements, which is the extension indicated in the mark scheme. Whilst this is one explained reason, rewarded with two marks, the second reason is essentially repetition as it considers material properties again.

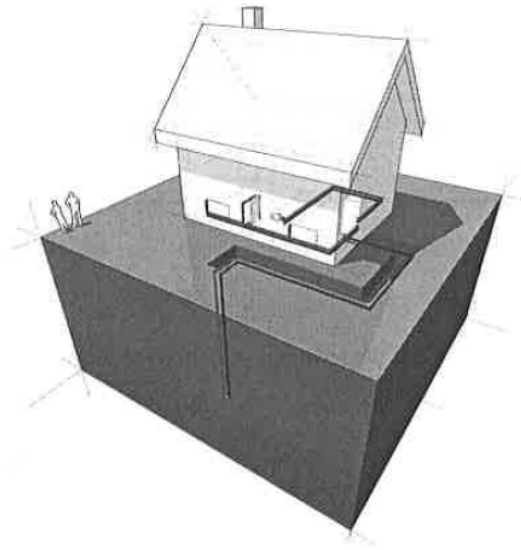
## Question 18

### Targeted Specification Area: Learning Aim C.4

This question targeted the use of heat pumps in a domestic heating system. Many learners struggled with this question, giving generic responses related to heating costs or explaining how central heating pumps work.

0 mark example:

The image shows a sustainable domestic heating system, which includes a heat pump.



Explain **one** advantage of using a heat pump in a sustainable domestic

Type your answer in the box.

the advantage is that the heat pump, pushes the heat through all the heat system and then heats up so that your house is warm

In this example the learner has confused the heat pump with a central heating pump.

2 mark example:

Explain **one** advantage of using a heat pump in a sustainable domestic

Type your answer in the box.

A heat pump will use geothermal energy which is renewable. This will save you money after your initial investment as you will not have to use a lot of electricity for your heating

In this response the learner has identified that using geothermal resources allows the user to reduce their energy bills, a very similar response to one of the exemplars given in the mark scheme. By identifying an advantage, then explaining why this is an advantage, two marks are awarded.



## Question 19

### Targeted Specification Area: Learning Aim B.4

This question targeted the potential use of hydrogen fuel cells in a new range of motorcycles. The question proved challenging for the majority of learners however, it is pleasing to see that many learners are attempting a detailed response as the question anticipates a balanced argument with a justification/conclusion.

Being the last question on the paper it is designed to present a level of challenge, with marks being awarded via mark bands (these are described at the end of the mark scheme). The question carries eight marks and the vast majority of learners, who attempted this question, were able to pick up marks from one of the levels/mark bands.

2 mark example:

LQR Automotive is a large-scale manufacturer of motorcycles.  
It is considering manufacturing a range of new motorcycles powered by hydrogen fuel cells.

Evaluate the use of hydrogen fuel cells as a power source for a new range of motorcycles manufactured by LQR Automotive. (8)

Type your answer in the box.

hydrogen fuel cells are used in the new motorcycle because it converts chemicals with water and they use it in the new motorcycle because it operates quietly and works efficiently which will be suited for the vehicle. Hydrogen is also used because it powers most device.

In this response the learner has given a basic consideration of hydrogen fuel cells. Points made are somewhat superficial and no conclusion is present. This characterises the answer as a Level 1 response, given two marks here as the learner has recognised the use of water in the process and the quiet nature of operation.

5 mark example:

LQR Automotive is a large-scale manufacturer of motorcycles.  
It is considering manufacturing a range of new motorcycles powered by hydrogen fuel cells.

Evaluate the use of hydrogen fuel cells as a power source for a new range of motorcycles manufactured by LQR Automotive. (8)

Type your answer in the box.

Hydrogen fuel cells are good because they are powered by water meaning that the source for the hydrogen is in an abundance; therefore meaning it is not likely to run out anytime soon. Hydrogen fuel cells are also good because they give off no harmful gasses or emissions into the atmosphere and as a result making the planet greener. This is good as motorbikes that use petrol or diesel as a fuel give off alot of harmful gasses such as CO2 which are damaging our planet. Hyrdrogen fuel cells also do not give of any waste material apart from water which is then put back into the atmosphere via evaporation. However there are some drawbacks to hydrogen fuel cells as they are very volotile and if there was a crash and hydrogen was present then there would be a high chance of explosion at the scene which could be deadly. Hydrogen fuel cells are also very expensive to set up and also replace if needs refilling, or is broken and needs repairing. Hydrogen fuel cells are also not that great as it is a new technology which not many people know about and therefore need specialist engineers. This means that it is not common and would also need specialist repairs.

In this response the learner has attempted to present positive and negative aspects and has identified a considerable rage of points. There is however little justification/conclusion, thus characterising this as a Level 2 response in the middle of this band.

7 mark example:

LQR Automotive is a large-scale manufacturer of motorcycles.  
It is considering manufacturing a range of new motorcycles powered by hydrogen fuel cells.

Evaluate the use of hydrogen fuel cells as a power source for a new range of motorcycles manufactured by LQR Automotive. (8)

Type your answer in the box.

The use of hydrogen fuel cells has many advantages and disadvantages. Some of the good things about it are that it gives off no emmissions such as carbon dioxide, it only gives out h20 water vapour making it very good for the enviroment. It also is extremely efficient and uses less hydrogen permile than an equivelent petrol bike would use in petrol. How ever a lot of fuel staions do not sell hydrogen yet so it would not be viable to people who dont live near a station that sells it or that need to travel long distances as they risk not being able to find hydrogen. Hydrogen fuel is also more expensive than petrol which might put people off the bike as well. A lot of motorcyclists enjoy the way a petrol bike sounds as well where as the hydrogen bike is nearly silent. And finally hydrogen fuel cells can not produce as much power as petrol engines as the technology has not gotten far enough yet. So there for hydrogen fuel cells are probably not a very viable power source for LQR's new range of motor cycles.

In this response the learner has presented a balanced consideration of the use of hydrogen fuel cells with a conclusion that has been clearly justified. This

exemplifies this response as Level 3. The majority of points are relevant and link to the situation in the question, a few more of those identified in the mark scheme would be expected to get full marks however.

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