GCSE

Design and Technology
Product Design

45551

Mark scheme

4555

June 2017

Version: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, i.e. if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Question	Marking Guidance	Marks	Comments
1(a)	Possible response themes are: **Child safety** - sharp edges, small pieces, toxic materials, skin irritation. **Not splinters as not specifically child safety.** **Material properties** - durability & toughness. Ability to withstand impact eg throwing, resistance to chewing. **Educational value** - literacy, numeracy, language, co-ordination, SEAL role play. **Learn =1** **Educate = 0**	3 x 2 marks	2 marks for each explanation of each aspect of learning. 1 point with qualification = 2 marks 2 simple points = 2 marks 1 simple point = 1 mark
1(b)	**12 -15 marks** Very creative design(s) highly suited to use by children in a nursery setting. Very clear and detailed specific materials, appropriate construction and assembly techniques provided by candidate. Explicit safety considerations and features identified for product to be fit for purpose. Excellent communication of the design using a variety of appropriate 2D/3D sketches with appropriate annotations. Expect high quality use of colours, tones and textures to further enhance communication. **8-11 marks** A creative design highly suited to use by children in a nursery setting. Clear and detailed specific materials, appropriate construction and assembly techniques provided by candidate. Safety considerations and features identified for product to be fit for purpose. Good communication of the design using a variety of appropriate 2D/3D sketches with appropriate annotations. Good use of colours, tones and textures to further enhance communication.		

1(b) continued	**4-7 marks** A design suited to use by children in a nursery setting. Some specific materials, appropriate construction or assembly techniques provided by candidate. Some safety considerations and/or features identified for product to be fit for purpose. Communication of the design using 2D/3D sketches with some annotations. Limited use of colours, tones and textures to further enhance communication. **0-3 marks** Attempt made at a design suited to use by children in a nursery setting. A significant lack of understanding and clarity in the response. Limited materials/ construction or assembly techniques provided by candidate. Few or no safety considerations or features identified for product to be fit for purpose. Communication of the design using simple sketches and/or annotations. Unclear and incomplete response. **No attempt / question not answered = 0 marks**	15	This question should be marked in conjunction with the additional exemplars. 1(b) is holistically marked.

1(c)	Evaluate how your product is suitable for use in the day nursery. Possible response themes: • Safety features eg small parts, sharp points, finger traps. • Materials used • Durability (eg resistance to wear and tear) • Ease of cleaning eg with antibacterial spray • Storage eg stacking/putting away) • Appearance –bright and bold colours to interact with children **NB One point in detail & depth is a 3 max award**	4	**4 marks** 2 or more points considered in detail and depth. **2-3 marks** 1-2 points considered, where one is explained in some detail for 3 marks **1 mark** 1 brief evaluative point made. **0 marks** No response/incorrect response.

1(d)	What are the advantages of using Computer Aided Design (CAD) to develop your idea? • Easy to edit and change a design in response to feedback • View the product virtually in 3D. Can rotate image to see from different angles. Can see how the product could go together (parts) • Able to generate a working drawing from a CAD image • Able to render and finish a product virtually to see what it would look like in real life. • Virtual testing of materials and components. • Ability to share and email designs with third parties instantly CAD drawing can be sent directly to CAM machine to improve speed, accuracy or manufacture etc. Reference to QC possible.	4	**4 marks** 2 or more points considered in detail and depth or 1 in detail and 2 in brief. **2-3 marks** 1 or 2 points considered, where one is explained in some detail for 3 marks **NB One point in detail & depth is a 3 max award** **1 mark** 1 brief point made. **0 marks** No response/ incorrect response.

1(e)	Describe two features a design for your product packaging would need to include. Explain why each is important. Indicative content: • Crash box construction • Barcodes • Symbols eg recycle • Logo • Price • Nutritional information **Responses might look at the aspects of the functions of packaging e.g. inform, protect, preserve, contain, transport & display.** **Examples:** **Instructions** and how to use product. Manufacturer details. End of life disposal detail. Need for batteries. **Nutritional information** detailing ingredients, sugar, fat allergy information etc. **Polystyrene inset** to stop the product from getting damaged before purchased and getting to customer/end user. **Bubble wrap** to wrap around different parts **Provide an image** of product in use/ what contents look like. Attractive design on the box to draw the customer in. **Secure** to keep small or loose parts together before assembly (might be a flat pack design). **Responses might look at constructional features of packaging** **Glue flaps/tuck flaps/folds and perforations** eg to aid assembly with or without glue and aid access to the contents.	4	Each appropriate feature = 1 mark (max 2 marks) Each correct supporting explanation = 1 mark (max 2 marks)

Question	Marking Guidance	Marks	Comments
2(a)	Correct response order is: **Tracing** **Cartridge** **Isometric grid** Note: Graph is a distractor and incorrect	3 x 1	1 mark for each correct paper type matched to correct description.

2(b)	Example responses could be: **Smartphone packaging box:** • Highly suited for high quality glossy graphics • Stiff board offering protection to high value product inside • Can print on/print brand logos on **Packaging for a new TV:** • Stiff large flat sheets due to flutes. • Cheap/Cost effective to package large objects • Lightweight so easy to carry. • Strength without much weight • Can be printed on • Durable because… • Can be recycled as the package is only used for a short time • Easy to move or stack in a cardboard box **Packaging for fruit juice:** • High quality surface finish suitable for attractive graphics. • Laminated with a foil or polymer lining to make it waterproof. • Waterproof lining does not react with juice and give it an unusual taste. • Waterproof/juice proof so carton does not get soggy. **DO NOT REWARD TO 'CATCH CUSTOMERS EYE'- THIS IS A FEATURE OF THE DESIGN NOT THE CARD** Easy = 0	6	N.B. Max of 2 marks for each form of packaging. 1 mark for each reason. **N.B. Accept repeats for different cards if correct.**

2(c)(i)	Explain why finishes are applied to materials for aesthetic reasons. Give examples. Any named **aesthetic** reason: • change the colour of a product, • improve appearance/ make the product look more attractive. • change the look and feel of a product Aesthetic finish examples: • Painting cars different colours to suit different customer tastes • Embossing in card to create a decorative 3D effect • Self finished surface eg the injection moulding process can 'build in' a textured surface in contrast to a smooth surface. • Icing sugar on cakes and biscuits to make them look more appetising • Glazing of food products to change pastry to a golden brown eg beaten egg • Add to decoration and quality of finish eg enamelling jewellery • Wood stains to enhance the colour of timber • Anodising to produce brightly coloured aluminium products eg bike wheels, maglites	3	A detailed response with clear understanding why a finish/finishes are applied to products and/or materials for aesthetic reasons = 3 marks Basic explanation of a reason why **one** finish applied to **one** named material or product for an aesthetic reason = 2 marks One simple point/ example of finish made eg painting, glazing = 1 mark

2(c)(ii)	Any named **functional** reason: • To make more suited to intended use/improve durability • To inhibit combustion/reduce fire risk (textiles) • Protect from moisture/water • To prevent insect /fungal attack (wood) • To resist corrosion • Build in a textured finish (polymers) • Provide a non-slip finish Functional finish examples: • flame retardants to textiles, • waterproof finish on a jacket • laminating a book cover to protect from moisture. • Glazing of a ceramic jar to improve water resistance and durability • Anodising aluminium to improve durability • Electro plating to provide a durable finish • Wood preservative on a garden fence to protect from moisture and insect attack. • Dip/powder coating of metals to inhibit corrosion • Waxing of fruit to prevent decay • Galvanising (not aesthetic reason) mild steel to resist corrosion • Self-finished surface eg the injection moulding process can 'build in' a textured surface to provide a non-slip surface/grip on a chair, child's toy etc.	3	A detailed response with clear understanding **why a finish/finishes** are applied to products and/or materials for functional reasons = 3 marks Basic explanation of a reason why **one** finish applied to **one** named material or product for a functional reason = 2 marks One simple point made eg to make water proof = 1 mark **NB allow repeats of finishes if correctly exemplified for functional reasons.**

Question	Marking Guidance	Marks	Comments
3(a)(i)	Possible features identified: • Non-conductive/plastic/polymer materials • Pre-molded plug • Use of 12v transformer • Docking station so no trailing leads • Inter-changable heads • Over moulded hand grip • No sharp edges **Big button =0** **On/off button =0**	2	1 mark for each correctly labelled feature.
3(a)(ii)	Explain how both of your identified features improve safety for the user: • Polymers are insulators/poor conductors and reduce chance of electric shock • Plug is already wired up so no chance of user wiring plug incorrectly • 12v supply reduces the chance of a fatal electric shock than a 240v supply. Wet hands of user would increase conductivity in the event of an accident. • No trailing leads (charging dock). • Tooth brush heads changed for individual users in the home. Periodic change for the individual to ensure effective and hygienic cleaning. • TPE polymer overmoulding or rubber on handle to provide firm non slip grip and avoid accidental dropping which could fracture casing and expose electronics. **NO MARK FOR RESTATING FEATURE = 0**	4	Can award credit if candidate has added response in 3a(i) rather than 3a(ii) **Both features MUST be considered for 4 marks.** **One feature really well explained = 3 marks max** **Any one point explained in detail with full clarification and understanding, or 2 points with no clarification = 2 marks** **Any one point simply explained = 1 mark**

3(b)	**QWC question** Students are expected to identify: 1. **possible hazards (H)** 2. **actions to minimise risks (A)** 3. **promotion of safe use (P)** **Possible discussion points are:** **RM** – jigsaw, hot glue gun, sander, laser cutter, pillar drill, lathe Textiles – wax pot, sewing machine, iron, needles, dyes, **Food**- oven - food processor, knives, mixers, microwave **Electronics**- UV light box, soldering iron, vacuum former, gerbil cutter **Graphics**- craft knives, vinyl cutter, guillotine, die cutters **Ceramics**- Kiln, pugging machine, pottery wheel, dyes and glaze. **Annotate script with:** **H – Hazard** **A – Action** **P – Promotion** **ONLY AWARD HAZARDS NOT EQUIPMENT OR MATERIALS** **DO NOT REWARD REPETITION – e.g. goggles for different hazards, the same hazard for different pieces of equipment, the same promotion for different hazards.** **DO NOT REWARD HAZARDS IN COMMERCIAL MANUFACTURE OR MATERIALS PROCESSING.** **E.g. splinters when handling rough sawn timber** **HAZARD SHOULD BE APPROPRIATE TO DESIGN & TECHNOLOGY DEPARTMENT WORKSHOP.** **Mark in clusters:** Hazard identified – 1 mark Action appropriate to identified hazard – 1 mark Promotion appropriate to identified hazard & action – 1 mark **MAX of 2xHazards/2xActions/2 x Promotions i.e. DO NOT REWARD lists of more than 2 hazards, actions or promotions. Credit best evidence / combination of H, A and Ps.** **Maximum 6 marks.** PLUS: **2 marks for full and well-structured explanation, 1 mark for brief/vague explanation**	8	**6 marks for H, A and P** **2 marks for explanation.** **Simple list of safety issues with examples = 4 max** **No response at all or a response with no reference to health and safety in a D&T department = 0** **No attempt = 0**

Question	Marking Guidance	Marks	Comments
4(a) 4(a)(i) 4(a)(ii) 4(a)(iii)	Possible response content: **Finite** Materials that will run out, from non-sustainable sources eg coal, oil, metal ores. Finite resources are usually mined and can lead to pollution of water courses, soil erosion, destruction of animal habitats and deforestation. **Biodegradable** Products or materials that degrade naturally with exposure to the environment eg air, water and light. Responses may discuss corn starch polymers, potatopak products as well as biodegradable polymers. **Reuse** Where a product or material is upcycled or reused in some way for its original purpose or a new purpose eg glass milk bottles, printer cartridges and internal components of disposable cameras. Reuse so less material processing needed, so more cost effective. Extending source material life. **WATCH FOR TALKING ABOUT RECYCLING -NO CREDIT**	3 x 2 marks	**N.B. Max of 2 marks for each sub part.** An extended response, where each word is clearly explained with 2 or more credit worthy points = 2 marks. A basic response with a single correct point = 1 mark. Incorrect response or no attempt =0 marks.

4(b)(i)	In what ways is information about the disposal communicated to the consumer? Give examples in your answer. Possible response content: Symbols marked in the products or their packaging eg polymer detergent bottles. The symbols identify if the product can be: • recycled, • type of material it is made from so it can be put in the correct recycling bin and aid sorting and separation • products not suited to disposal in normal domestic bins eg batteries and electrical goods Promotion (sponsorship) or aftercare of recognised recycling centres eg Nespresso offer a collection service for the coffee cartridges for their coffee machines. Manufacturer may offer free collection service for your old product eg white goods, taking inconvenience away from customer.	4	**4 marks** 2 or more points considered in detail and depth. **2-3 marks** 1 or 2 points considered, where one is explained in some detail for 3 marks **NB One point in detail & depth is a 3 max award** **1 mark** 1 brief point made. **0 marks** No response/ incorrect response.

4(b)(ii)	How would your chosen product be designed and manufactured with sustainability in mind? Possible response content: **Material selection** - sourced sustainably eg Forest Stewardship Council FSC, biodegradable material used(wood) **Disassembly** - ease of taking the product apart at the end of its useful life eg KD furniture using KD fittings. Also removal of electrical components from the toaster for precious/semi-precious metals. **Material separation** - ease of separating different materials from each other eg glass jar from screw polymer lids **Recycle, reduce, reuse** - use of recycled materials eg polymers, metals. Use less/fewer packaging materials for the products in the first instance. **Carbon Footprint** - use local materials and producers to reduce the amount of carbon produced and its overall impact on the environment. **Fairtrade** - using producers where they get a fair deal and guaranteed a price for products to encourage sustainable production. **Modern manufacturing systems** **QA & QC –** better more reliable products needing less frequent replacement.	4	**4 marks** 2 or more points considered in detail and depth. **2-3 marks** 1 or 2 points considered, where one is explained in some detail for 3 marks **NB One point in detail & depth is a 3 max award** **1 mark** 1 brief point made. **0 marks** No response/ incorrect response.

<table>
<tr><th>Question</th><th>Marking Guidance</th><th>Marks</th><th>Comments</th></tr>
<tr><td>5(a)</td><td>
<table>
<tr><td>Difference</td><td>One -off</td><td>Continuous</td></tr>
<tr><td>Scale</td><td>1 unique product only</td><td>Many identical products</td></tr>
<tr><td>Work force</td><td>One highly skilled person, labour intensive
One person will complete several tasks.</td><td>Less skilled workers, few used</td></tr>
<tr><td>Timescale</td><td></td><td>Made 24/7 with no planned end to production</td></tr>
<tr><td>Automation</td><td>No</td><td>Highly automated involving production lines.</td></tr>
<tr><td>CAD/CAM?</td><td>Possible use, but using hand fabrication and simple tools</td><td>Greater use made</td></tr>
<tr><td>Example products.</td><td>Wedding dress.
Unique artwork.
Bespoke furniture.
Prosthetic limbs.</td><td>Newsprint.
Kitchen roll.
Disposable cups.
Aerosol cans
Generic packaging containers.
Chemical
BREAD =0</td></tr>
</table>
</td><td>4</td><td>One mark for each identified difference = 2 marks max.

An appropriate example of a product made using each method = 2 marks max.</td></tr>
</table>

5(b)	ACCEPT ANY PROCESS THAT WOULD MAKE A SIMILAR WALL CHART TO THAT IN PICTURE Detailed notes or sketches or both giving relevant details of materials, manufacturing and finishing processes. **(4 marks)** Notes or sketches or both giving details of at least two from materials, manufacturing and finishing processes. **(3 marks)** Basic notes or sketches or both with some consideration of materials, manufacturing or finishing processes. **(2 marks)** Very limited notes or sketches attempting to give limited detail of at least one from materials, manufacturing or finishing processes. **(1 mark)** No attempt or no consideration of materials, manufacturing or finishing processes. **(0 marks)** **Name material e.g. MDF =1** **Named finish e.g. varnish = 1** **Cartridge paper is not suitable for this product = 0**	4	

5(c)(i)	**How materials would be checked on arrival at the factory.** Possible response content: • Correct amount or size • Check against original order specification • Check batch numbers • Check for surface defects and blemishes • Check for colour consistency **DETAIL ABOUT TESTS FOR FLAMABILITY, DURABILITY ARE PERFORMANCE TESTS DONE DURING DEVELOPMENT = 0**	3	Three specific checks identified **or** two checks with one clarified in detail =3 marks. Two checks identified **or** one clarified = 2 marks. One correct check given = 1 mark Incorrect response/no attempt = 0 **For each check make sure it is appropriate for materials, manufacture or finish given in 5(b).**

5(c)(ii)	**The quality control measures the manufacturer should take when making the height chart.** Possible response content: • Use of jigs, templates and mould to replicate components/parts. • Use of standard components to assemble the design. • Use of CAD/CAM in the design and manufacture to ensure consistency and replication. • Stock forms • Standard settings of CAD/CAM setup • Quality of finish • Quality of manufacture • Check dimensions are correct • Colour registration • Sampling and checking during making **NO MARKS FOR REPEATS e.g. SEVERAL FINISH CHECKS.** **DO NOT REWARD TESTS DONE DURING PRODUCT DEVELOPMENT e.g. STRESS TESTS, FLAMMABILITY.**	4	Four correct QC measures or three measures with one clarified or 2 measures both clarified = 4 marks. Three correct QC measures or two with one clarified = 3 marks. Two correct QC measures or one clarified = 2 marks One simple reference to QC = 1 mark Incorrect response/no attempt = 0 **For each QC measure, make sure is appropriate for materials, manufacture or finish given in 5(b).**

5(c)(iii)	**Describe how Computer Aided Manufacture (CAM) could be used in the manufacture of the height chart.** **Possible content:** **LOOKING TO REWARD PROCESSES <u>NOT</u> BENEFITS** • Used to make a template • Laser cutting • Die cutting • Digital printing • Computer aided embroidery • Sublimation printing • Vinyl cutting **DO NOT reward benefits like;** • Consistency = 0 • Speed up production = 0 **CAN NAME A PROCESS BUT NOT ESSENTIAL TO GET MARK.** Clear and detailed explanation (and understanding) of how CAM would be used in the manufacture of the height chart. **(5 marks)** Explanation showing a reasonable understanding (with minor	5	

	errors) of how CAM would be used in the manufacture of the height chart. **(4 marks)** . Basic understanding of how CAM would be used in the manufacture of the height chart. **(3 marks)** A limited understanding of CAM. An attempt to say how CAM would be used to make the height chart. **(2 marks)** Any single credit worthy point demonstrating either a simple understanding of CAM, a named piece of suitable CAM equipment or one brief explanation point. **(1 marks)** No attempt to explain how CAM would be used in the manufacture of the height chart. **(0 marks)** **Mention of die cutting and laser cutting if suited = 1 each**		

5(c)(iv)	**Packaging methods used by the manufacturer for the height chart to be sold on the internet.** NB Can be for manufacturer or customer benefit. • Bubble wrap - More protection needed against bumps and knocks when sent by mail order/courier eg additional packaging around the normal product packaging. • Corrugated card packaging used by Amazon or similar. Avoid creasing or penetration of package during transit. • Easy open packaging with clear instruction how to access contents without damage. • Moulded polystyrene (PS) inserts to the height chart from moving in the box/ package during transit. • Rolled up and place in a tube (to avoid creases). • Polystyrene shells loosely packed around the height chart in a box. • Package will contain a picking list, receipt, return details, assembly instructions so the manufacturer can communicate with the consumer.	3	Three specific packaging methods identified **or** two methods with one clarified in detail =3 marks. Two packaging methods identified **or** one clarified = 2 marks. One correct packaging method given = 1 mark Incorrect response/no attempt = 0 **For each packaging method make sure is appropriate for materials,**

5(d)	**Advantages of advertising on the internet:** **FOR THE MANUFACTURER** • Manufacturer can reach out to potential customers with mobility issues who can consider a product purchase in the comfort of their own home. • Able to advertise 24/7 and not pay for expensive TV adverts etc. • No need to operate a range of shops and employ staff to manage them. • A few large centralised distribution centres next to a motorway etc. • Advertise complete range of products and specification options. Cannot do this on a billboard, magazine advert etc. **FOR THE CUSTOMER** • Check stock levels online rather than visiting shop and finding they have run out of a particular product. • See a full / greater range of products available at the click of the mouse. • Cash loyalty (purchase tracking) schemes eg Quidco • Save time without having to walk, drive etc to get to shops • Items can be delivered directly to the door and do not need carrying if you are old or infirm etc. • Use of price comparison websites. • Links to online retailer provided customer reviews about each product to help you make an informed decision.	4	Advantage statement with explanation, detail or example = 2 marks Simple advantage statement = 1 mark

Question	Marking Guidance	Marks	Comments
6(a)	**Possible features:** • Hand sizes for hand grips – for firm grip and so your hand fit round • Posterior size for saddle • Feet sizes for pedals so you have a positive contact with pedal. • Finger/hand sizes for switch/buttons on control panel. Make sure buttons are not too small to press ie press two at once. • To decide on range over which saddle needs to adjust ie 5th to 95th percentile range • Hand/palm size to grip seat adjustment knob. The right size to gain leverage to lock seat securely in position. • Determine diameter of the drinks bottle so your hand fit's round it and you can remove it when thirsty.	3 x 2	One mark for each correct feature identified One mark for each explanation of the feature **NB Feature MUST be anthropometric and NOT ergonomic.** **Simple or vague feature can be rewarded if extra detail is given in explanation.**

6(b)	**5th to 95th percentile ranges are used because:** • Allow manufacturer to cater for the greatest range of users • Allow manufacturer to sell more products as it can be used by a greater range of users • Allow the product to be used by lots of different sized/shaped users • Avoid excluding as many people as possible from exercise which is good for you.	3	1 mark per valid point. 2 points where at least one is explained /clarified = 3 marks.

6(c)	**Problems that might arise for a user outside the 5th to 95th percentile range:** • Unable to use the exercise bike comfortably • Might not be able to use it safely • Unable to exercise and become unhealthy • Have to spend more on a specialist made exercise bike.	2	1 mark per problem identified. Award 2 marks for one problem identified and explained/clarified

6(d)	**Modified shower environment:** • Hand/grab rail • Seat • Open plan shower/wet room allowing user to walk in without stepping up/over bath edge etc. • Seat can be lifted up if the user happens to be able bodied and does not need to sit down • Anti-slip tiles to prevent slipping **Modified bathroom environment:** • Improved access around 2 long sides and an end of the bath to allow cares to help a user in the bath e.g. old or infirm. • Significant floor space to aid mobility of a wheelchair user • Supportive head /neck rest attached to the bath • Handles on the inside of the bath for grip/support against slipping. • Non slip surface on the floor of the bath • Hand rail next to the toilet to promote independence. • An electric lift raising/lowering bath to allow user ease of access/ support the carer or medical staff. • Long reach bath hose so that a user does not have to stretch too far. • Basin mounted lower for wheelchair user.	6	**Using either or both bathroom environments:** **NB No credit for naming feature alone.** One feature explained in detail = 2 marks One feature simply explained = 1 mark No attempt/ incorrect response = 0 marks **A combination of the above to a maximum of 6 marks.** **IF IT IS NOT CLEAR WHAT FEATURE IS BEING TALKED ABOUT AWARD ZERO MARKS.** **NO MARKS FOR REPEATED POINTS.**