

Q1.

Explain how manufacturers can protect their invention from being copied by other manufacturers.

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(Total 3 marks)

Q3.

A wheelchair user can find moving around their daily environment difficult.



Suggest ways in which designers can help minimise these difficulties for wheelchair users.
Give reasons in your answer.

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(Total 6 marks)

Q4.

This question is about inclusive design.

Products are often modified for disabled users.



Suggest how the telephone shown above could be modified to be more suitable for each of the following users with disabilities.

Explain how the modification helps the user.

- (i) A hearing impaired user

Modification:

Explanation:

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(3)

- (ii) A visually impaired user

Modification:

Explanation:

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(3)

(Total 6 marks)

Q5.

Portable music players have changed over time.



(i) CD players were very popular in the 1990s.

Explain why CD players might be considered to be bad for the environment.

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(3)

(ii) MP3 players are very popular today.

Explain why MP3 players might be considered to be environmentally friendly in comparison with CD players.

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(3)
(Total 6 marks)

Q6.

Describe **two** ways in which supermarkets are encouraging us to stop wasting materials.

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(Total 4 marks)

Q7.

(i) Manufacturers market their products through advertising.

Name **three** different methods of advertising.

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(3)

(ii) Choose **one** of the methods you have named in part (i).

Explain how this method of advertising persuades consumers to buy the product. Use examples of products in your answer.

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(4)
(Total 7 marks)

Q8.

This question is about product marketing.

Using examples, explain what is meant by *brand identity*.

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(Total 4 marks)

M1.

Use of Trademark, Copyright, registered designs and patents to protect their designs from being copied. Legislation provides protection so that a company can sue another company for breach of copyright etc. Products carry symbols which tell the consumer that the product originates from the original manufacturer and is therefore not a copy. Patents protect the features and processes which make products work (technology).

A concise and detailed response showing a good understanding of copyright and trademarks and which makes reference to two ideas in detail or several in brief.

3 marks

Sound response which makes reference to two of the ideas above in brief or one idea in detail.

2 marks

Brief / single word answer with reference to one idea only.

1 mark

[3]

M2.

Planned obsolescence is the conscious decision on the part of a manufacturer to produce a consumer product that will become obsolete and/or non-functional in a defined time frame. Planned obsolescence has great benefits for a producer in that it means a consumer will buy their product repeatedly, as their old one is no longer functional or desirable and not economical to repair.

Planned obsolescence has an obvious detrimental effect on the environment as it is a planned waste of resources, particularly as typical products might use high levels of non-renewable or difficult to recycle materials. Planned obsolescence encourages use of more non-renewable materials, energy for processing raw materials and production processes, transport, pollution, packaging materials and disposal in land fill. Products could be built to last and be repairable – reference to 5 R's.

A concise and detailed response showing a good understanding of the above factors. Examples of relevant products used to illustrate points. Response well structured with good use of appropriate design and technology terminology and showing a good grasp of grammar, punctuation and spelling.

7-8 marks

A sound response showing a basic understanding of the above factors. At least one example of relevant products used. Response fairly well structured with some use of design and technology terminology with small number of errors in grammar, punctuation and spelling.

5-6 marks

A reasonable response although may be simplistic and lacking in detail, examples of products or understanding of planned obsolescence. Response has simple structure with limited use of design and technology terminology and some errors in grammar, punctuation and spelling.

3-4 marks

A simplistic statement which mentions one point only. Response may not include examples of relevant products or products selected may not be appropriate to argument. Response poorly structured with little or no use of design and technology terminology and with numerous errors in grammar, punctuation and spelling.

1-2 marks

No relevant argument presented.

0 marks

No credit for consumable products such as disposable razors or batteries

[8]

M3.

e.g. lightweight frame so not tiring or difficult to manoeuvre over long periods of time; ergonomically designed seat which can be adjusted so that the user is comfortable when sitting for long periods of time; angled wheels for greater speed and manoeuvrability; suspension to cushion when goes over bumps. Motorised, electric powered, folding frame, more compact frame.

Accept modifications to the environment, ramps, automatic / wider doors, lowered light switches.

Maximum 2 marks for simplistic responses detailing car park layout.

A concise and detailed response showing a good understanding of designing for disabled users including several well reasoned points.

5-6 marks

A sound response showing a basic understanding of the factors relating to designing for disabled users.

3–4 marks

A simplistic response which mentions one point only.

1–2 marks

No relevant argument presented.

0 mark

[6]

M4.

- (i) Any appropriate **modification** which will help the deaf user use the telephone more effectively.

1 mark

Modification 1 mark

e.g. light which flashes when the phone is ringing.

Explanation is relevant to and qualifies modification.

2 marks

Do not accept standard phone functions such as volume control, speakerphone and speed dial.

Simple statement.

1 mark

3

- (ii) Any appropriate **modification** which will help the blind / visually impaired user use the telephone more effectively.

Modification 1 mark

e.g. larger screen for visually impaired / remove screen, larger buttons, Braille on buttons.

Explanation is relevant to and qualifies modification.

2 marks

Do not accept standard phone functions such as volume control, speakerphone and speed dial.

Simple statement.

1 mark

3

[6]

M5.

- (i) Compact discs are made of non-recyclable plastic and have a limited life span in use as they can be scratched. CD packaging (to protect and market the CD) uses large amounts of plastics and printed card. CD players are still in use but reducing in popularity as they are a permanent media which cannot be renewed or refreshed – the music is pre-recorded to the CD and cannot then be removed or the playlist edited. Music tends to be a collection of tracks from one artist which cannot be edited by the user. Production of CDs uses energy and produces waste. To dispose of would be thrown away which wastes plastics which are non-renewable; will end up in a land fill.

A concise and detailed response relating to environmental impact showing a good understanding of two or more points fully expanded.

3 marks

A clear description relating to environmental impact which mentions more than one issue.

2 marks

A simplistic statement which mentions one point only. (1 mark)

3

- (ii) Music is downloaded from a computer and is the user's choice of tracks; music can originally come from the internet taking away the need to buy CD's and therefore reducing consumption of plastics and card for the CD and its packaging and the energy and resources used in their manufacture. The user can purchase individual tracks rather than albums. Can use rechargeable batteries which is better for the environment as batteries have a much longer life span and so less end up in landfill;

A concise and detailed response relating to reduced environmental impact showing a good understanding of two or more points fully expanded. (3 marks)

A clear description relating to reduced environmental impact which mentions more than one issue.

2 marks

A simplistic statement which mentions one point only.

1 mark

Other suggestions:

MP3 players store music as a data file and not many can be stored at a time and deleted when finished with. No waste materials. Fewer moving / mechanical parts hence product has a potentially longer life cycle.

No transport costs involved in down loading tracks. CD's have to be transported to a point of sale.

3

[6]

M6.

Any two strategies supermarkets employ to encourage us to stop wasting materials. E.g. bags for life; limiting giving out of carrier bags; less plastic used in manufacture of carrier bags; carrier bags fully recyclable; reducing packaging; recycling banks in car parks; replacing non-renewable packaging materials for renewable ones e.g. using card instead of plastic; using recycled Polyethylene Terephthalate (rPET), which can itself be fully recycled, in food packaging.

Sound response which makes reference to two of the opposite ideas or one idea in detail.

2 marks

Brief / single word answer with reference to one idea only.

1 mark

2×2 marks

[4]

M7.

- (i) Any three appropriate advertising methods a manufacturer might use to market their products.

e.g. Billboard / bus stop / bus poster campaign, newspapers and magazines; product placement in TV programmes; TV, radio and cinema advertising; sports sponsorship; celebrity endorsement / 'face of', consumer advertising (large logos on clothing etc.)

Viral marketing – internet social networks, buzz words.

3×1 mark

3

- (ii) A concise and detailed response showing a good understanding of how the specific method of advertising increases sales and including relevant examples of products.

4 marks

A sound response showing a basic understanding of how the specific method of advertising increases sales and may include a relevant product example.

2–3 marks

A simplistic statement which mentions one point only or a relevant example product only.

0–1 mark

4

[7]

M8.

Brand identity is typically the attributes associated with a brand, how the brand owner wants the consumer to perceive the brand – and by extension the branded company, organization, product or service. A 'brand' involves using a name, term, colour, symbol, design or combination of these to identify the goods or services to make them appealing. Brands often speak to who we are and our aspirations, humanise the product and give it a personality of its own. E.g. Nike – 'swoosh', energy, movement, quality, a way of life, free, independent, overcoming all obstacles, physical limitations and inhibitions, 'tick' – affirmative, 'just do it'. Swoosh – Single image communicates what the organisation want its customers to know about them

Concise and detailed response which makes reference to two or more of the opposite ideas in detail and includes appropriate brand / product examples given which support points made. (4 marks)

Sound response which makes reference to two of the opposite ideas in brief or one in detail with at least one appropriate example to support points made. (3 marks)

Basic response which makes reference to one of the above ideas in brief but may not have included an example or example is not relevant. (2 marks)

Brief / single word answer with reference to one idea only. (1 mark)

[4]

