

Markscheme

May 2026

Design technology

Higher level

Paper 3

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General Marking Instructions

Subject Details: Design Technology HL Paper 3 Markscheme

Mark Allocation

Candidates are required to answer **ALL** questions in Section A (total **[20 marks]**) ONE question in Section B **[20 marks]**. Maximum total = **[40 marks]**.

Markscheme format example:

Question			Answers	Notes	Total
4.	b	ii	the displacement and acceleration ✓ are in opposite directions ✓	Accept <i>force</i> for <i>acceleration</i> .	2

- Each row in the “Question” column relates to the smallest subpart of the question.
- The maximum mark for each question subpart is indicated in the “Total” column.
- Each marking point in the “Answers” column is shown by means of a tick (✓) at the end of the marking point.
- A question subpart may have more marking points than the total allows. This will be indicated by “**max**” written after the mark in the “Total” column. The related rubric, if necessary, will be outlined in the “Notes” column.
- An alternative wording is indicated in the “Answers” column by a slash (/). Either wording can be accepted.
- An alternative answer is indicated in the “Answers” column by “**OR**” on the line between the alternatives. Either answer can be accepted.
- Words in angled brackets < > in the “Answers” column are not necessary to gain the mark.
- Words that are underlined are essential for the mark.
- The order of marking points does not have to be as in the “Answers” column, unless stated otherwise in the “Notes” column.
- If the candidate’s answer has the same “meaning” or can be clearly interpreted as being of equivalent significance, detail and validity as that in the “Answers” column then award the mark. Where this point is considered to be particularly relevant in a question it is emphasized by **OWTTE** (or words to that effect).
- Remember that many candidates are writing in a second language. Effective communication is more important than grammatical accuracy.
- Occasionally, a part of a question may require an answer that is required for subsequent marking points. If an error is made in the first marking point then it should be penalized. However, if the incorrect answer is used correctly in subsequent marking points then **follow through** marks should be awarded. When marking, indicate this by adding **ECF** (error carried forward) on the script. “ECF acceptable” will be displayed in the “Notes” column.
- Do **not** penalize candidates for errors in units or significant figures, **unless** it is specifically referred to in the “Notes” column.

Section A

Question			Answers	Notes	Total
1.	a		Income; Profession; Age; Family; Values; Behaviour;	<i>Award [1] for each market segment up to [2 max].</i>	2 max
1.	b		Field testing is based on real user experiences (weather or surface conditions); which provides more authentic / realistic feedback; unlike a lab's-controlled environment;	<i>Award [1] for identifying one way field testing of an Eco Fitness Soccer Ball in a natural environment would be more beneficial than in a usability laboratory and [1] for a development up to [2 max].</i>	2 max
1.	c		Increasing sales / enhancing brand loyalty; by offering their footballs in three sizes / for different age groups / satisfying a wider range of users; cost effectiveness; as the group of products in a product family share common parts/ assemblies/ machinery/ staff/ skills/ suppliers; achieving economies of scale; by buying (materials) in bulk;	<i>Award [1] for identifying one benefit to the company of creating a product family for Eco Fitness equipment and [1] for a development up to [2 max].</i>	2 max

Question			Answers	Notes	Total
1.	d		Quality assurance is process-oriented; takes place throughout the process (covers all activities from design to documentation); ensuring the quality of raw materials / machines / staff / inspection processes / assemblies; to prevent defects / to meet specifications / to meet safety standards; and provide consumer confidence in the ball/ brand loyalty; max [4]	<i>Award [1] for why quality assurance is important in the production of the Eco Fitness soccer ball and [1] for each subsequent explanation up to [4 max].</i>	4

Question			Answers	Notes	Total
2.	a		Cyclic; Safe; Efficient; Social;	<i>Award [1] for each of Datschefski's five principles of sustainability up to [2 max].</i>	2 max
2.	b		Cost-plus; A pricing strategy where a company will add a mark-up/percentage to the total costs incurred for a product (production, design, distribution etc.); psychological; Where a product is priced to give the consumers the impression that it is they are paying less; competitor-based/competition-based; A pricing strategy where a product is positioned in the market based on the price of similar products / the company will position the product by pricing it lower, similar or higher than similar products; Price-minus strategy; a pricing strategy that determines a product's appropriate price then subtracts the profit to determine cost-effectiveness; product line; Where the different products from the same product range are positioned at different price points; demand; A pricing strategy where a company will set the price based on the demand for the product;	<i>Award [1] for identifying one possible price setting strategy and [1] for a development up to [2 max].</i>	2

Question			Answers	Notes	Total
2.	c		Ideo pleasure: The Sodapop fenders provide ideo-pleasure by satisfying people's ideals/values; as they are made from recycled soda beverage bottles; and 1% of their revenue is donated to nonprofit organizations; The Sodapop fenders provide ideo-pleasure by satisfying/appealing to people's tastes; as they are narrow / simple / minimalist; and finished in a matt/black color/single color; Physio pleasure: The Sodapop fenders provide physio-pleasure through (enhancing) sensory appeal; as they redirect water spray and mud away from the bicycle rider; protecting the user to stay dry/comfortable; The feeling/touch of the fender appeals to physio-pleasure; The fenders are simple/lightweight; Easy to install and uninstall;	<i>Award [1] for identifying how the Sodapop Fender appeals to the user's physio pleasure and [1] for each subsequent development of that disadvantage up to [3 max].</i> <i>Award [1] for identifying how the Sodapop Fender appeals to the user's ideo-pleasure and [1] for each subsequent development of that advantage up to [3 max].</i> <i>Mark as [3] + [3].</i>	6

Section B

Question			Answers	Notes	Total
3.	a		Minimizing the use of non-renewable materials; limiting the amount of packaging; offering product refills; offering virtual try-on / skin tone-matching services / makeup tutorials [providing on-going instructional content on social media]; discounts; supporting the Foundation / charity / supporting social sustainability /promoting ethical consumerism;	<i>Award [1] for each way that Fenty Beauty policies could encourage brand loyalty up to [2 max].</i>	2
3.	b		Fenty Beauty products are environmentally/socially responsible / encourage positive buying; as they minimize the use of non-renewable materials / limit the amount of packaging /support the Clara Lionel Foundation; Refills are available for purchase so the product can be re-used; limit amount of waste (material/energy);	<i>Award [1] for identifying a way that purchasing Fenty products can be seen as an example of ethical consumerism and [1] for a development of up to [2 max].</i>	2 max

Question			Answers	Notes	Total
3.	c		Literature search; From reports/newspapers/magazines to conduct research; Expert appraisal; using the knowledge and skills from an expert in the field; User trial; observing people using the product/collection of comments from people who use it; User research; obtaining user responses through questionnaires/surveys/interviews; Perceptual mapping; by comparing products to other in the market/identify market gaps/to establish Fenty Beauty competitors/how consumers perceive a product in relation to other competing products in the market; Environmental scanning; identifying trends/opportunities/threats that can affect the development of Fenty Beauty products;	<i>Award [1] for identifying one market research strategy and [1] for a development of that way up to [2 max].</i>	2 max

Question			Answers	Notes	Total
3.	d		CIM integrates the entire process (design, planning, purchasing, cost accounting, inventory control, distribution); creating more efficient/automated production lines; with no large storage spaces/inventory/produced when order is made; reducing the size of the workforce; reducing lead time / errors / delay from third party suppliers; CIM integrates the entire process (design, planning, purchasing, cost accounting, inventory control, distribution); allowing automated tracking/analysis of all expenses; measures materials, labor, and overhead to determine the exact cost of making a product; Reduce errors/costs; helping managers optimize profitability/set prices/reduce waste;	<i>Award [1] for identifying an advantage of using computer integrated manufacturing (CIM) in implementing a just in time (JIT) approach for production of CLF 3-Piece Makeup Bags and [1] for each subsequent development of that reason up to [5 max].</i>	5

Question		Answers	Notes	Total
3.	e	Economic Selling refills for the products a lower cost to maintain current customers; Give a percentage off 10% off to subscription customers; Give student 15% the price of the products; 35% of sales of the CLF 3-Piece Makeup Bag goes to the Clara Lionel Foundation; Social Utilize virtual color match charts/have a virtual consultation with a makeup expert/review a makeup comparison; Access the database of products that are trending on social media/TikTok; Watch makeup tutorials released on specific days; Environmental Reuse /refill/renewable accessories without buying a new applicator/ Recycle packaging/adding post-consumer recycled materials into our bottles, tubes and jars; Reduce/eliminate all unnecessary packaging/ use paper packaging when needed; Discontinued use of magnets in products; Donations and revenue for the CLF 3-Piece Makeup Bag go to the Clara Lionel Foundation; which funds climate resilience, climate justice projects and advocates for system change in the US and Caribbean countries.	<i>Award [1] for identifying how Fenty Beauty meets each of the corporate social responsibility economic objectives and [1] for each subsequent development of up to [3 max].</i> <i>Award [1] for identifying how Fenty Beauty meets the corporate social responsibility social objectives, and [1] for each subsequent development of up to [3 max].</i> <i>Award [1] for identifying how Fenty Beauty meets the corporate social responsibility environmental objectives and [1] for each subsequent development of up to [3 max].</i> <i>Mark as [3] + [3] + [3].</i>	9