2019 HSC Design and Technology Marking Guidelines

Section I

Multiple-choice Answer Key

Question	Answer
1	B
2	D
3	C
4	C
5	D
6	A
7	A
8	D
9	B
10	B

Section II

Question 11 (a)

Criteria	Marks
• Identifies TWO different methods of evaluation	2
• Provides some relevant information	1

Sample answer:

Making a model.
Surveying a niche market.

Question 11 (b)

Criteria	Marks
• Provides characteristics and features of how evaluation aids the design of a product	3
• Sketches in general terms how evaluation aids the design of a product	2
• Provides some relevant information	1

Sample answer:

Evaluation allows designers to test ideas prior to being put into full production. This can be achieved by the designers developing a prototype to see if the design works. This will then provide the opportunity for further modifications.

Question 12

Criteria	Marks
• Provides points for and/or against the influence that technology can have on the design process	4
• Describes the influence that technology can have on the design process	3
• Outlines an influence of technology on the design process	2
• Provides some relevant information	1

Sample answer:

Technology, like CAD/CAM, can improve the process used by designers. For example, whereas designers used to rely on paper based drawings, they can now use CAD/CAM technologies to 3D print a model of the object to be made. This is an improvement on the paper based technique as moving from 2D to 3D perspective of the object helps demonstrate the depth of detail that will allow the consumer to make educated decisions about the final design. However, the use of this technology may involve additional costs in resources and/or staff training, which may impact the design process.

Question 13

Criteria	Marks
• Makes evident the influences of changing social trends on design practices	6
• Shows some relationship between changing social trends and design practices	5
• Describes how changing social trends influence design practices	4
• Sketches in general terms how changing social trends influence design practices	2–3
• Provides some relevant information	1

Sample answer:

Changing social trends can influence design practice through the use of the latest technology. As emerging technologies become commonplace in society, designers will adapt their practice to make their workflow easier. For example, with the introduction of the NBN internet communication lines and the trend to use the new system accelerates, designers are able to download, work online and send much larger files from home computers rather than using the power of a dedicated server at the workplace. The effect of being able to incorporate the trend of the latest communication system into daily practices has allowed the designer to free up their time and not be constrained by the technological requirements of a dedicated workplace.

Section III

Question 14

Criteria	Marks
• Shows a comprehensive understanding of factors that help determine the success or failure of an innovative design • Draws out and relates implications of factors that help determine the success or failure of an innovative design • Provides a logical and cohesive response, supported by relevant examples	13–15
• Explains how factors help determine the success or failure of an innovative design • Communicates using relevant examples • Provides a mostly logical and cohesive response	10–12
• Describes factors that determine the success or failure of an innovative design • Provides a mostly organised response, supported by relevant example(s)	7–9
• Outlines factors that determine the success or failure of an innovative design • Provides example(s)	4–6
• Demonstrates some understanding of factors that determine the success or failure of an innovative design	1–3

Answers could include:

Successes

Timing – The release of a new product aligned to the season change will encourage the consumer to consider purchasing the product based on their perceived needs.

Social – The rising demand for the innovative supply of home food products, which includes recipes and the exact ingredients for a meal, has been a successful factor due to society's desire for ease and convenience in food preparation.

Political – Support by government bodies that encourages initiatives in education that drive innovation. For example, STEM education used to create engineering knowledge.

Failures

Available Technologies – The need for the latest technologies to be able to operate as intended as the latest innovation is released. This can be seen in the need for the latest Smartphones to operate via Bluetooth technology rather than hard wire plugs. For example, headphone.

Cultural – Attempting to develop new and innovative designs without considering the cultural needs of the consumer. For example, the provision of the latest technologies to poor communities who are struggling to obtain electrical power.

Marketing Strategies – Communicating the operational qualities of a product that does not work or is limited in its use leading to the product's demise. For example, safety features in motor vehicles that are required to be recalled due to the injuries they inflict on a driver when implemented.

Function – The product's ability to work as intended. For example, with the introduction of the electric car the batteries need to be able to meet the driving needs of the consumer in order for the product to be deemed successful.

Aesthetics – The latest mobile phone is required not only to look good, but also to be able to display relevant information in a way that is attractive to the user. If the latest innovations are not being adopted by the manufacturer the consumer will be drawn to the competitor's product. This can be seen in features like the wrap around screen that are emerging in the latest products.

2019 HSC Design and Technology Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Design factors	H1.1
2	1	Market research	H1.1
3	1	Design process	H1.2
4	1	Design practice	H4.1
5	1	Design factors	H1.1
6	1	Communication	H5.2
7	1	Emerging technologies	H6.2
8	1	Built-in obsolescence	H1.1
9	1	Product design	H1.2
10	1	Marketing strategies	H3.1

Section II

Question	Marks	Content	Syllabus outcomes
11 (a)	2	Evaluation methods	H4.3
11 (b)	3	Evaluation process	H4.3
12	4	Technology and the design process	H3.2, H6.2
13	6	Social trends	H2.1

Section III

Question	Marks	Content	Syllabus outcomes
14	15	Success and/or failure of innovation	H3.1