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# 2023 HSC Design and Technology Marking Guidelines

## Section I

### Multiple-choice Answer Key

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

## Section II

### Question 11

Criteria	Marks
<ul style="list-style-type: none"><li>• Outlines a factor that could affect the impact on the success or failure of a design</li></ul>	2
<ul style="list-style-type: none"><li>• Provides some relevant information</li></ul>	1

**Sample answer:**

One important factor that can affect a design's success or failure is functionality, which refers to how well a product, system, or environment performs its intended function. If the design fails to perform its intended function efficiently, it may result in design failure.

**Answers could include:**

- Appropriateness of the design solution
- Needs
- Aesthetic
- Finance/Cost
- Ergonomics
- Obsolescence
- Time

## Question 12

Criteria	Marks
<ul style="list-style-type: none"> <li>• Demonstrates a thorough understanding of how a social trend has led to a higher demand for innovative solutions</li> </ul>	3
<ul style="list-style-type: none"> <li>• Demonstrates an understanding of how a social trend has led to a higher demand for innovative solutions</li> </ul>	2
<ul style="list-style-type: none"> <li>• Provides some relevant information</li> </ul>	1

### **Sample answer:**

The desire to be in constant contact with others has increased the demand for devices that communicate in a variety of formats. These platforms allow individuals to communicate anytime anywhere around the world.

### **Answers could include:**

- The growth of social influencers has affected the direction of certain design products and production process.
- The desire to use innovation and current technologies for the purpose of education and communication eg social media, entertainment and communication platforms
- Environmental awareness and the impact of government legislation, such as single use plastic bags, plastic containers and cutlery.

## Question 13

Criteria	Marks
<ul style="list-style-type: none"> <li>• Provides an explanation of the advantages of ONE communication technique that could be used when presenting information to a client</li> </ul>	4
<ul style="list-style-type: none"> <li>• Demonstrates an understanding of the advantages of ONE communication technique that could be used when presenting information to a client</li> </ul>	3
<ul style="list-style-type: none"> <li>• Demonstrates understanding of the advantage(s) of ONE communication technique</li> </ul>	2
<ul style="list-style-type: none"> <li>• Provides some relevant information</li> </ul>	1

### **Sample answer:**

Interactive prototyping can improve client communication. A tangible model or digital simulation lets the client interact with the proposed design. Interactive prototypes allow clients to experience the product's functionality, usability, and aesthetics, helping them understand its benefits. This hands-on approach improves communication, reduces misunderstandings, and allows clients to provide valuable feedback, resulting in better design decisions and a better outcome.

**Question 14**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"> <li>• Provides a thorough discussion of ONE technology</li> <li>• Makes thorough reference to society and the environment</li> <li>• Makes reference to lifestyle improvement</li> </ul>	6
<ul style="list-style-type: none"> <li>• Provides a sound discussion of ONE technology</li> <li>• Makes sound reference to society and the environment</li> <li>• Makes reference to lifestyle improvement</li> </ul>	5
<ul style="list-style-type: none"> <li>• Provides a discussion of ONE technology</li> <li>• Makes reference to cost to society OR the environment OR Lifestyle improvements</li> </ul>	4
<ul style="list-style-type: none"> <li>• Demonstrates some understanding of a technology in relation to the statement</li> </ul>	2–3
<ul style="list-style-type: none"> <li>• Provides some relevant information</li> </ul>	1

**Sample answer:**

The impact of modern transportation exemplifies the dual nature of technology. While it has enhanced our lifestyles with greater accessibility and convenience, it has also posed significant challenges to society and the environment. The proliferation of automobiles has revolutionised personal mobility, connecting people and places like never before. However, this convenience has contributed to issues like traffic congestion, air pollution, and the depletion of fossil fuels. Therefore, while technology has improved our lives in various ways, its implementation demands a thoughtful consideration of its consequences to mitigate negative effects and achieve sustainable progress.

## Section III

### Question 15

Criteria	Marks
<ul style="list-style-type: none"> <li>Provides a comprehensive analysis of the ethical and social implications for designers in the creation of solutions to world issues</li> <li>Provides a logical and cohesive response</li> <li>Communicates ideas and information using relevant examples</li> <li>Makes detailed reference to TWO alternate world issues facing designers</li> </ul>	13–15
<ul style="list-style-type: none"> <li>Provides some analysis of the ethical and social implications facing designers in the creation of solutions to world issues</li> <li>Provides mostly a logical and cohesive response</li> <li>Communicates information using examples</li> <li>Makes reference to TWO alternate world issues facing designers</li> </ul>	10–12
<ul style="list-style-type: none"> <li>Provides a sound understanding of the ethical and social implications facing designers in the creation of solutions to world issues</li> <li>Refers to alternate world issues facing designers</li> </ul>	7–9
<ul style="list-style-type: none"> <li>Demonstrates a basic understanding of the ethical and/or social implications facing designers in the creation of solutions to world issues</li> </ul>	4–6
<ul style="list-style-type: none"> <li>Provides some relevant information</li> </ul>	1–3

**Answers could include:**

Addressing complex challenges in society requires designers to be creative in developing solutions. However, when creating solutions to global health matters or living conditions, designers must also consider the ethical and social implications of their designs.

#### Health

*Ethical Implications*

- Privacy and Data Security
- Equity and Accessibility
- Informed Consent

*Social Implications*

- Health Disparities
- Stigmatisation and Discrimination
- Cultural Sensitivity

## **Living Conditions**

### *Ethical*

- Government support – childcare, housing (stamp duty) and medical
- Energy costs – capping on prices for gas and electricity
- Faster introduction of greener technologies
- Wage demand
- Health and wellbeing of displaced individuals and communities
- Safety and security.

### *Social*

- Diminishment of ones living standards and conditions
- Impact of climate change
- Impact of housing – relocating to more affordable areas, demand for social housing, pop-up housing, transportable pods, space and availability of housing
- Impact of families and young adults resulting in children living longer at home due to cost of living
- Economic and social protection.

As designers tackle complex global challenges, they must be mindful of the ethical and social implications inherent in their solutions. By considering global health matters and global living conditions, designers can create impactful solutions that address the diverse needs of society while respecting ethical principles and promoting social well-being.

# 2023 HSC Design and Technology Mapping Grid

## Section I

Question	Marks	Content	Syllabus outcomes
1	1	Analysis of evaluation	H4.3
2	1	Factors which may impact on successful innovation	H1.1
3	1	Factors which may impact on successful innovation	H1.1
4	1	Identification and exploration of the need	H1.2, H2.2
5	1	Safe working practices	H4.2
6	1	Factors which may impact on successful innovation	H1.1
7	1	The impact of emerging technologies	H3.1, H6.2
8	1	Entrepreneurial activity	H2.2
9	1	Factor which may impact on successful innovation	H1.1
10	1	Ethical and environmental issues	H2.2

## Section II

Question	Marks	Content	Syllabus outcomes
11	2	Factors which may impact on successful innovation	H1.1, H3.1
12	3	Factors which may impact on successful innovation	H2.1
13	4	Communication	H5.2
14	6	The impact of emerging technologies	H6.2

## Section III

Question	Marks	Content	Syllabus outcomes
15	15	Ethical and environmental issues	H6.2