



B O A R D O F S T U D I E S
NEW SOUTH WALES

2010 HSC Design and Technology Sample Answers

This document contains ‘sample answers’, or, in the case of some questions, ‘answers could include’. These are developed by the examination committee for two purposes. The committee does this:

- (a) as part of the development of the examination paper to ensure the questions will effectively assess students’ knowledge and skills, and
- (b) in order to provide some advice to the Supervisor of Marking about the nature and scope of the responses expected of students.

The ‘sample answers’ or similar advice are not intended to be exemplary or even complete answers or responses. As they are part of the examination committee’s ‘working document’, they may contain typographical errors, omissions, or only some of the possible correct answers.

Section II

Question 11

Answers could include:

Designers can communicate with clients and/or their team by using:

- Forms of technology based communication, such as mobile phone (3G), Skype, email and multimedia presentations
- Forms of verbal communication through the use of conferencing and formal and informal meetings
- Forms of visual communication, such as modelling, sketching, CAD drawings and prototypes.

Question 12

Answers could include:

School signage could include – safety and emergency signage, school promotional signage (noticeboards at front of school), school crest/logo and road signage such as parking, school entry and speed zones.

In designing signage for a school the designer would need to consider factors specific to the needs/use of the signs such as size, colour/contrast, location, visibility, cost, ease of interpretation, durability of materials, ease of installation and any associated standards.

Designers would also need to consider the audience that the signage is aimed at, their age, height, ability to read, culture and 'home' language.

Question 13

Answers could include:

Determining the validity of the research data being applied, particularly in relation to secondary data.

Is the data current and relevant?

The subjective nature of viewing qualitative vs quantitative data.

Was the research data based upon a biased sector of the market?

Was the research data gathered in an ethical, moral, legal manner?

The effect of the application upon the P/S/E

Question 14

Answers could include:

Presentation techniques can either be formal or informal – verbal, models, multimedia, prototype, virtual reality, sketches and rendered presentations. The selection of the technique will often be based upon the stage of the design process and its appropriateness to the client.

The presentation must provide for:

- Two-way communication – feedback from the client
- Need to be enticing/persuasive and capture the audience/client
- Be appropriate for to the situation – is it to be informative/technical, dynamic/persuasive

Section III

Question 15 (a)

Answers could include:

Nature of work can be:

- The work of a designer
- Paid work as evident through employment
- Volunteer work
- Anything that is based upon a task, eg mowing the lawn, washing the dishes/clothes.

The impact of new technologies upon the nature of work:

- More efficient processes – immediacy
- Greater flexibility in work hours
- Formal/informal hours of work – where does work finish and family time commence?
- Greater portability allows for the ability to work from a variety of locations, whilst in transit from work, home, interstate and globally
- Safer work environments
- Automated production – less human employment
- Re-distribution of labour force – more people involved in training and development – greater reliance on retraining of staff – up-skilling
- Reduced physical space required for work environments
- Greater opportunities for employment – more vocations available.

Question 15 (b)***Answers could include:***

Using existing technology in an innovative way or combining a range of existing technologies into one new product

Technologies may include but are not limited to:

CAD/CAM, ICT, 3D modelling, WiFi, sustainable power technologies, materials technologies, touch screen technology, and nano-technologies.

How they are used:

- Build on existing design/modifications
- Increase multi-functioning qualities – more innovative features
- Use innovative materials to create environmentally friendly design
- Create smart technology
- Further enhance mobile technology

Implications:

- Greater success
- Improved product (quality/functionality)
- Greater reputation for cutting edge technology
- Presents as a more responsible design (environmental and social)
- Compete with market leaders
- Increase market share
- Build reputation of success
- Increased safety
- Take advantage of superior materials.