



NSW Education Standards Authority

2019 HIGHER SCHOOL CERTIFICATE EXAMINATION

Design and Technology

**General
Instructions**

- Reading time – 5 minutes
- Working time – $1\frac{1}{2}$ hours
- Write using black pen

**Total marks:
40**

Section I – 10 marks (pages 2–4)

- Attempt Questions 1–10
- Allow about 15 minutes for this section

Section II – 15 marks (pages 5–8)

- Attempt Questions 11–13
- Allow about 35 minutes for this section

Section III – 15 marks (pages 9–12)

- Attempt Question 14
- Allow about 40 minutes for this section

Section I

10 marks

Attempt Questions 1–10

Allow about 15 minutes for this section

Use the multiple-choice answer sheet for Questions 1–10.

- 1** A designer is looking to produce a new line of environmentally-friendly washing machines.

Which of the following would be the major focus for the designer?

- A. Operational capabilities
 - B. Water-saving capabilities
 - C. How much the product will cost consumers
 - D. Whether the product will appeal to the target market
- 2** Why does a designer conduct market research?
- A. To increase brand awareness
 - B. To increase the number of sales
 - C. To better understand their client
 - D. To identify the needs for the intended design
- 3** A design for a new shopping centre food court has been commissioned.
- At what stage of the design process would the designer first create a CAD model?
- A. Initial contact with clients
 - B. Brainstorming potential ideas
 - C. Presentation of ideas for feedback
 - D. Reflection of feedback and changes to design
- 4** Why do designers establish and review ‘criteria to evaluate success’ when designing?
- A. To increase the number of sales of a product
 - B. To ensure environmental factors are considered
 - C. To ensure the final design meets the specified needs
 - D. To maintain product awareness for further refinement of innovative products

- 5 In designing a suitable aid for the ageing population, a designer would first consider that the end product is
- A. durable and well made.
 - B. cost effective and easy to store.
 - C. aesthetically pleasing and easy to use.
 - D. able to meet a need and be ergonomically designed.
- 6 Within the design process, social media can best be used as
- A. a form of communication.
 - B. an innovative design practice.
 - C. a current digital design technique.
 - D. an acceptable industrial procedure.
- 7 People have moved from capturing holiday memories using a digital SLR camera, which has the single function of taking photos, to a multifunctional smartphone with a camera application.



Digital SLR camera



Smartphone

- A reason for this shift to using smartphones is most likely to be the
- A. convenience of capturing experiences.
 - B. obsolescence of single function cameras.
 - C. capability to capture higher quality images.
 - D. process allowing for the easy digital storage of photos.

- 8** Built-in obsolescence creates opportunities for ongoing profits for companies by
- A. constantly reviewing existing product lines.
 - B. incorporating technologies into the latest products.
 - C. encouraging people to change functioning products that they own.
 - D. generating a need for individuals to keep updating existing products.
- 9** Who would be the person most likely to influence the features of a new sports watch?
- A. A product designer
 - B. A running enthusiast
 - C. A business entrepreneur
 - D. A biomechanical engineer
- 10** Why do information and communication technology (ICT) companies take risks with their products by supplying their software at discounted prices or free of charge to students?
- A. To test the software product prior to its release to industry
 - B. To establish product familiarity in order to capture future market share
 - C. To stop illegal software piracy by students copying and sharing computer programs
 - D. To obtain personal data when the product is downloaded, and selling it to cover costs

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Centre Number

Design and Technology

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Student Number

Sections II and III

Answer Booklet

Instructions

- Write your Centre Number and Student Number at the top of this page
- Use this answer booklet for Sections II and III
- Follow the instructions inside this booklet as to where you should write your answers

Please turn over

Section II

15 marks

Attempt Questions 11–13

Allow about 35 minutes for this section

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 11 (5 marks)

(a) Identify TWO different methods of evaluation. 2

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(b) Describe how evaluation can aid the design of a product. 3

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Question 12 (4 marks)

Discuss the influence that technology can have on the design process.

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