



EXAMINATIONS COUNCIL OF SWAZILAND
Swaziland General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

6902/01

Paper 1 Design

October/November 2018

1 hour 15 minutes

Candidates answer on the pre-printed A3 answer sheets

Additional Materials: Standard Drawing Equipment

To be taken together with the optional paper for which you have been entered in one session of 2 hours and 15 minutes.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number, and name in the spaces provided on **both** printed answer sheets.

Write in black or blue pen.

You may use an HB pencil for any diagrams, graphs, or rough working.

Do not use staples, paper clips, glue or correction fluid.

There are three questions in this paper

Answer **one** question.

The total of marks for this paper is 50.

At the end of the examination, tie your answer sheets together.

The number of marks is given in brackets [] at the end of each question or part question.

You may use an electronic calculator.

This document consists of 4 printed A4 pages and 2 A3 inserts.

Answer **one** question only on the **A3** pre-printed answer sheets provided.

- 1 Household garbage that is not disposed of properly, can be a danger to animals and also cause pollution to clean river water and the environment as a whole.



Design a free standing unit to protect garbage from dogs overnight before disposal.

- (a) List **four** points about the function of such a free standing unit that you consider to be important. [4]
- (b) Use sketches and notes to show **two** different methods that could be used to join materials when making the free standing unit. [4]
- (c) Develop and sketch **three** ideas for the unit. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (f) Suggest **two** suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]

- 2 A new company called **Easy Wash Laundromat** offers clothes washing services in a shopping mall. It needs to attract new customers.



Design a portable signage that will direct customers to the new company.

- (a) List **four** points about the function of such a signage that you consider to be important. [4]
- (b) Use sketches and notes to show how **two** flexible joints could be used to join card or other lightweight material. [4]
- (c) Develop and sketch **three** ideas for the signage. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (f) Suggest **two** suitable specific materials for your solution and give reasons for your choice. [4]
- (g) Design a logo for the company with the name '**Easy Wash Laundromat**' clearly showing. [6]

3 Children who own pets develop a sense of responsibility and care for animals early in life.



Design a pull-along carrier for transporting the pets to the veterinary centre. The carrier must produce a warning/clicking sound and a rotary movement for a signage to say 'Pets in Transit' when moving.

List **four** points about the function of such a carrier that you consider to be important. [4]

- (a) Use sketches and notes to show **two** methods by which the clicking sound and rotary movement could be created. [4]
- (b) Develop and sketch **three** ideas for the pull-along carrier. [12]
- (c) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (d) Draw, using a method of your own choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (e) Suggest **two** suitable specific materials for your final solution and give reasons for your choice. [4]
- (f) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]