



EXAMINATIONS COUNCIL OF ESWATINI  
Eswatini General Certificate of Secondary Education

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**DESIGN AND TECHNOLOGY**

**6902/01**

Paper 1 Design

**October/November 2022**

**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 15 minutes.**

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**READ THESE INSTRUCTIONS FIRST**

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

Write in dark blue or black pen.

You may use a soft 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 the 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.

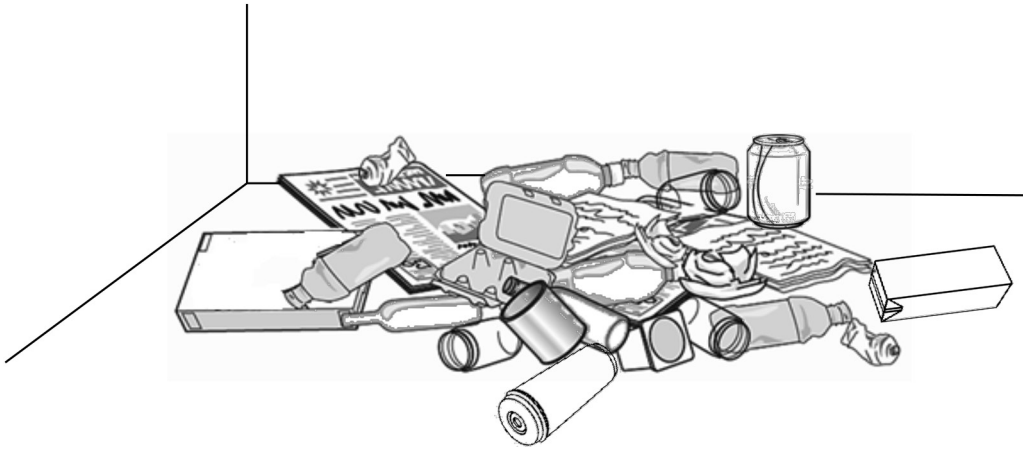
You may use a calculator.

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

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

- 1 Macondza residents are now being expected to recycle waste products to help conserve raw materials.



Design a unit that will fit into a space in a kitchen and store four types of waste products of different materials separately.

- (a) List **four** additional points about the function of such a unit that you consider being important [4]
- (b) Use sketches and notes to show **two** places where such a unit could be positioned in a kitchen. [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 the problem. Include construction details and important 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. [6]

- 2 Nenekazi Hardware wishes to promote the sale of a new range of kitchen waste bins.



Design a freestanding promotional display that could be placed at the entrance of the hardware shop.

- (a) List **four** additional points about the function of such unit that you consider to be important. [4]
- (b) Use sketches and notes to show **two** different methods that could be used to strengthen cardboard. [4]
- (c) Develop and sketch **three** ideas for the promotional 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 the problem. Include constructional construction details and important dimensions. [12]
- (f) Suggest **two** suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution. [6]

- 3 Many soft drinks in Nenekazi Supermarket are sold in cans similar to the one shown below.



Design a device, for use in the home that will crush empty cans of the type shown so that they take up less space for recycling.

- (a) List **four** additional points about the function of such a device that you consider to be important. [4]
- (b) Use sketches and notes to show **two** mechanisms that could be used in such a device. [4]
- (c) Develop and sketch **three** ideas for the device. [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 the problem. Include construction details and important 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. [6]