



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

DESIGN AND TECHNOLOGY

6902/01

Paper 1 Design

October/November 2020

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.

READ THESE INSTRUCTIONS FIRST

Write your centre number, candidate number and 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 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.

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 Selling products to potential buyers is a common practice amongst vendors in Eswatini and many other countries in Southern Africa.



Design a display unit for such products that should also advertise products for sale.

- (a) List **four** additional points about the function of such a display unit that you consider to be important. [4]
- (b) Use sketches and notes to show **two** different methods by which the products can be displayed. [4]
- (c) Develop and sketch **three** ideas for the display 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 final solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in a school workshop. [6]

- 2 A local sports club known as **Micro Games** has organised a one day sports gala for Pre-school children to promote sports.



Design a promotional card including some type of feature that attracts attention. The card will be distributed to people that will attend the gala.

- (a) List **four** additional points about the function of such a card that you consider to be important. [4]
- (b) Use sketches and notes to show **two** types of features that would attract attention on such a card. [4]
- (c) Develop and sketch **three** ideas for the card. [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 of producing **one** prototype of your solution in the school's Graphics room. [6]

- 3 Building is a fast growing industry in developing countries including Eswatini. The lifting of building materials like mortar is a very difficult task.



Design a mortar lifting device with some form of mechanism. The device must be used anywhere around the building.

- (a) List **four** additional points about the function of such a mortar lifting device that you consider to be important. [4]
- (b) Use sketches and notes to show **two** different types of mechanisms that can enable the device to lift the mortar. [4]
- (c) Develop and sketch **three** ideas for the mortar lifting 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 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]