

NAMIBIA SENIOR SECONDARY CERTIFICATE

DESIGN AND TECHNOLOGY ORDINARY LEVEL

4129/2

PAPER 2

1 hour 45 minutes

Marks 60

2020

Additional Materials: A3 drawing paper
Non-programmable calculator
Standard drawing equipment

INSTRUCTIONS AND INFORMATION TO CANDIDATES

- Answer on the separate A3 drawing paper provided.
- Write your Centre Number, Candidate Number and Name on all the work you hand in.
- Do not use correction fluid.

- There are **three** questions in this Question Paper.
- Answer **one** question only.

- At the end of the examination, staple all your work securely together.
- The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **4** printed pages.



Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

There are **three** questions in this paper.

Answer **one** question using the A3 drawing paper provided.

1 Communication

Many HIV and AIDS related information and awareness programmes have already been launched. However, the latest statistics indicate a rise in the number of people infected with HIV.



As part of a revised campaign to inform and raise awareness of HIV and AIDS issues related to prevention, management and support structures a poster and sticker are to be designed. The design for the poster should fit on the A3 drawing paper provided and the sticker should fit inside a $\text{Ø } 100 \text{ mm}$ circle. The sticker, with graphics taken from the poster, will be distributed on the day of the launching.

- (a) List **four** possible points about the appearance of such a poster that you consider to be important. [4]
- (b) List **four** different places where the poster could appear so that the campaign would be successful. [4]
- (c) Explore and sketch **three** ideas for a poster. [15]
- (d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]
- (e) Draw, using any suitable method, your final design solution. Include important details for your design. [18]
- (f) Explain how the use of computers might assist in the design of such a product. [4]
- (g) Use sketches and notes to design the sticker and describe how it will be manufactured. [7]

[60]

2 Resistant Material

Tractor drivers spend long hours exposed to the scorching sun and dust while ploughing, harvesting and doing other related work.



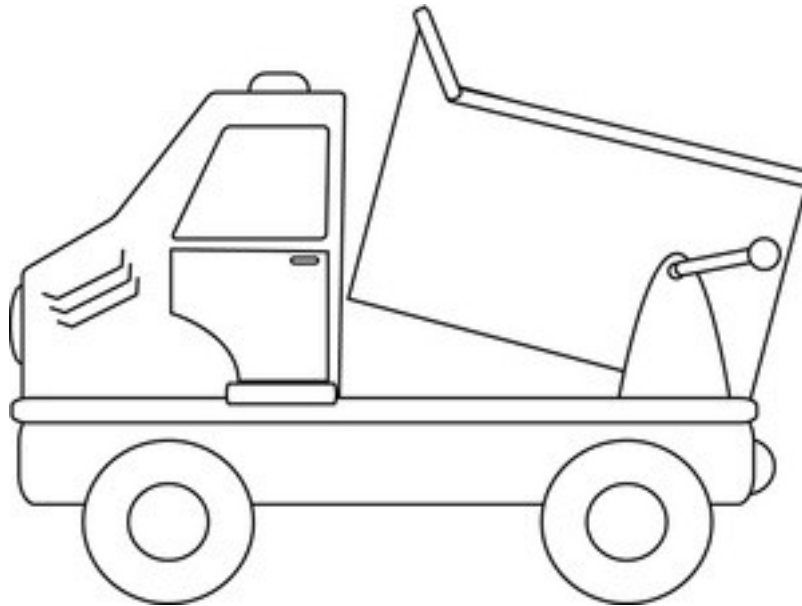
A canopy that provides shade and protects the driver from dust is required.

- (a) List **four** points about the function of such a canopy that you consider to be important. [4]
- (b) Describe **two** different methods that could be used to mount the canopy to the tractor. [4]
- (c) Develop and sketch ideas for a canopy that could provide shade and protect the driver from dust. [15]
- (d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]
- (e) Draw, using any suitable method, your final design solution. Include dimensions and construction details. [18]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture one part of your solution in a school workshop. [7]

[60]

3 Technology

When wound up and activated, the 1930 model toy truck travelled in a forward direction only. However, the winding mechanism has to be replaced with an electronic device.



An electronic and/or mechanical system is required to make the truck move forward and backward.

- (a) List **four** points about the function of such a system that you consider to be important. [4]
- (b) Describe **two** mechanical and/or electronic systems that could be used to control the movement. [4]
- (c) Choose **one** of the systems described in part (b) and use sketches and notes to develop ideas for the system. [15]
- (d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]
- (e) Draw, using any suitable method, your final design solution. Include dimensions and construction details. [18]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture one part of your solution in a school workshop. [7]

[60]