



ZIMBABWE SCHOOL EXAMINATIONS COUNCIL
General Certificate of Education Ordinary Level

DESIGN AND TECHNOLOGY
PAPER 2 Design Practical

4053/2

NOVEMBER 2019 SESSION

3 terms

Additional materials:
As listed in the Instructions to Supervisors.

TIME 3 terms

INSTRUCTIONS TO CANDIDATES

Attempt **one** option only.

This question paper consists of 2 printed pages.

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Attempt Option A or B.

OPTION A

People spend more time fetching water using buckets from wells, which is time consuming and strenuous. Investigate methods of drawing water.

Design, draw and model a mechanism which is fast, efficient and not strenuous, for collecting water from wells.

OPTION B

A farmer located near a major road has problems in displaying horticultural products for sell to travellers. The farmer has resorted to use of make-shift tables. The farmer requires displaying equipment for use at the road side.

Investigate displaying equipment.

Design, draw and model a unit for horticultural products. The unit among other things should be freestanding, provide protection from bad weather conditions to the products and the seller. It must be attractive and user friendly.

General Notes

When candidates are working on the design, the application of electronics IT (Auto CAD) applications and Mechanical Mechanisms is central to the effective solving of Design problems in line with the updated Design and Technology syllabus.

Candidates are allowed and encouraged to produce a scaled down version of their design when realising the artefact. They are also encouraged, where possible and relevant to combine different materials, eg metal, wood, plastic and ceramics in realising their designs.

Candidates should choose **one** option only and produce:

- (i) a detailed A3 Design folio showing the development of the design process from the situation through to the final drawings of the solutions. The final section of the folio should include the evaluation, a well constructed mock-up of the chosen solution in any suitable materials.
- (ii) a well constructed artefact/prototype of the developed refined solution.