

PRINCIPAL EXAMINER'S REPORT



BOTSWANA
EXAMINATIONS
COUNCIL

JCE DESIGN & TECHNOLOGY

2022



COMPONENT 2

General Comments

This report evaluates the candidates' responses on component 2 of the 2022 examination. The report covers candidates' responses on section A (questions on recall, materials, and technology) as well as section B (application of knowledge and problem solving). The candidates were able to attempt all the sections of the question paper fairly.

Section A

Question 1

- (a) Candidates were able to state the reasons for keeping the workshop clean.
- (b) Most candidates were able to state one safety rule to be observed when working with materials.

Question 2

Most of the candidates were able to state the two classes of metals, but only a few candidates stated the specific name of the metal.

Question 3

Most of the candidates were able to state/name the section of metal shown in the diagram.

Question 4

Most of the candidates were confusing the term recycling and reuse. Most of the candidates were able to state the term resistor instead of resistance.

Question 5

At "P" most candidates were able to state the specific name of the mechanism LEVER, but in the second part, Q most did not do well in naming the mechanism GEAR.

Question 6



- (a) Most of the candidates were able to draw the symbols of the electronic components but some drew them in circuit diagrams. The ones who drew a symbol of a bulb mostly omitted the connecting wires.
- (b) Most candidates were able to show the formulae but the final answer a lot of them did not get it, especially the symbol.

Questions 7 & 8

It was evident that there was a lack of knowledge on processes, and also it showed a lack of practical demonstration.

Question 9

- (a) It was well done, and accessible to most candidates (matching products with source)
- (b) Most candidates were able to state one advertising company of the products.

Question 10

Most candidates came up with situations bearing two concerns. The question seemed confusing since it appeared candidates were not conversant with the term DESIGN SITUATION and instead just SITUATION.

Section B

Question 11

- (a) Most candidates were able to state the specific name for the container and nozzle, but few candidates stated general names for the plastics.
- (b) The reasons stated did not link to the materials stated in (a), therefore it was poorly done. Candidates were writing general properties instead of working properties.
- (c) Poorly done, candidates there were not able to suggest a possible method of producing the container.
 - i. Most of the candidates were able to state one protective clothing to be worn.
 - ii. Poorly done – candidates unable to state three pieces of equipment needed to produce the container
- (d) Poorly done - candidates were not able to state the method of fitting the nozzle to the trigger (threading, twisting, screwing, force fitting)



Question 12

- (a)
 - i. Candidates were able to state the specific wood solid timber.
 - ii. Well done-most gave reasons for the choice
- (b) Averagely done, some were able to give correct joints (mortise and tenon).
- (c) Poorly done, candidates did not identify the risk posed when the chair is used instead, they wrote collapsing and breaking of the legs when they were not correct.
- (d)
 - i. Candidates were not able to come up with correct solutions, instead brought up solutions that were not able to solve the problem.
 - ii. Averagely done, the tools had to be linked to the solution which in most cases candidates did not get.
 - iii. Most were able to state the correct finish.

Question 13

- (a)
 - i. Well done, candidates were able to state the specific material for making the holder and basin
- (b) Poorly done-candidates unable to state methods (rawl bolting, screwing with plugs)
- (c) Most of the candidates were not able to come up with the correct bit for the wall (masonry)
- (d) Poorly done - Candidates did not correctly draw the surface development as dictated by the questions.
- (e) Poorly done, candidates failed to state the correct fixing onto the wall (rawl bolting, screwing with plug).

Question 14

Candidates were not able to present their designs in full three Dimensions resulting in marks lost. Materials and construction not fully provided/ accounted for also leading to marks lost. Finishes partly covered and dimensions not addressed by most candidates.