



For Performance Measurement

ZIMBABWE SCHOOL EXAMINATIONS COUNCIL
General Certificate of Education Advanced Level

METAL TECHNOLOGY AND DESIGN

6040/3

Paper 3 Drawing and Design

SPECIMEN PAPER

Time: 3 hours

Additional materials

TIME 3 Hours

ADVANCE INFORMATION

Please see page 2.

This question paper consists of 3 printed pages and 1 blank page.

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ADVANCE INFORMATION

INSTRUCTIONS

All materials, tools and equipment required for this examination are to be provided by the centre.

Candidates must not be allowed a second supply of materials. No assistance or information other than printed in the examination papers is to be given to candidates. Shaping of materials should be done using machine tools unless instructed otherwise.

NB: Reducing of material to examination requirements and preparation of special parts candidates is done before the examinations. Failure to prepare materials as specified will seriously handicap candidates.

Where Bright Drawn Mild Steel (BDMS) is not available, Black Mild Steel (BMS) will be accepted, but all surfaces and edges should be cleaned. Each candidate should be supplied with the listed materials.

MATERIALS

Each candidate requires the following materials:

- (i) \varnothing 32 x 108 bright drawn mild steel bar
- (ii) \varnothing 42 x 30 bright drawn mild steel piece
- (iii) 100 x 80 x 30 mild steel plate
- (iv) M8 x 13 x 1,2 cheese head screw

TOOLS AND EQUIPMENT

- (a) **Drilling machine – 5 pupils per machine**
 - 8,2 drill bit
 - Centre drill
 - \varnothing 12,2 drill bit
 - \varnothing 12,2 counter bore
 - \varnothing 6,8 drill bit
- (b) **Taps and Dies**
 - M14 x 2 taps and suitable tap wrench
 - M14 x 2 die and suitable die stock
 - M8 x 2 taps and suitable tap wrench
- (c) Milling Machine – two pupils per machine \varnothing 8 slot drill
 - Shell end mill cutter
- (d) Lathe Machine – two pupils per machine
 - Turning tools
 - 45° RHS and LHS chamfering tools
 - Face tools
 - Diamond knurling tool
- (e) Marking and Measuring tools
 - Angle plate
 - Surface plate
 - Veneer height gauge
 - Scriber
 - Veneer callipers
 - Steel rule

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