VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

Victorian Certificate of Education 2018

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER | | | | | | | | | | Letter |

VCE VET FURNISHING

Written examination

Thursday 15 November 2018

Reading time: 9.00 am to 9.15 am (15 minutes)
Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

Section	*Number of questions*	*Number of questions to be answered*	*Number of marks*
A	20	20	20
B	9	9	40
C	4	4	40
			Total 100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers and one scientific calculator.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.

Materials supplied
- Question and answer book of 18 pages
- Detachable insert for Section C in the centrefold
- Answer sheet for multiple-choice questions

Instructions
- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.
- All written responses must be in English.

At the end of the examination
- Place the answer sheet for multiple-choice questions inside the front cover of this book.
- You may keep the detached insert.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

SECTION A – Multiple-choice questions

Instructions for Section A

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.
Choose the response that is **correct** or that **best answers** the question.
A correct answer scores 1; an incorrect answer scores 0.
Marks will **not** be deducted for incorrect answers.
No marks will be given if more than one answer is completed for any question.
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

Question 1

Before beginning the construction of a set of six dining chairs, it is necessary to

A. buy all the hardware.
B. machine all the timber.
C. write the production plan.
D. present the invoice to the client.

Question 2

Loose mortise and tenon joints are

A. made without specialist equipment.
B. strong and can be made quickly.
C. a traditional leg and rail joint.
D. assembled without glue.

Question 3

Which tool is used to take measurements for the installation of a vanity cabinet?

A. 50 m tape measure
B. 8 m tape measure
C. 1000 mm ruler
D. 300 mm ruler

Question 4

Jeff and the foreman are setting out a kitchen build in the factory. They need to ensure that the set out baselines are at 90º.

Which ratio is used to measure a right angle for the set out?

A. 3:2:1
B. 2:4:6
C. 3:6:9
D. 3:4:5

Question 5

The most accurate way to measure the total length of kitchen base cabinets is to

A. use a calculator.
B. scale from the plans.
C. take overall measurements.
D. add up incremental measurements.

Question 6

Which one of the following is **not** a timber defect?

A. bowing
B. cracking
C. loose knots
D. grain direction

Question 7

Seasoned timber has a moisture content that is between

A. 5% and 7%
B. 8% and 16%
C. 20% and 25%
D. 25% and 30%

Question 8

What is the floor area, in square metres, of a room measuring 15 000 mm × 6000 mm?

A. 9.0 m^2
B. 9.5 m^2
C. 90 m^2
D. 95 m^2

Question 9

Ten metres is equal to

A. 100 mm
B. 1000 mm
C. 10 000 mm
D. 100 000 mm

Question 10

One advantage of using quartersawn timber is that it is

A. less likely to cup.
B. less likely to split.
C. more likely to cup.
D. more likely to split.

Question 11

Veneered particle board (VPB) can be joined using a

A. mortise and tenon joint.
B. biscuit joint.
C. bridle joint.
D. box joint.

Question 12

What information is shown on a Material Safety Data Sheet (MSDS)?

A. the tax invoice
B. instructions for use
C. the expiry date of the product
D. health hazard information

Question 13

Which type of screws are used to assemble white melamine kitchen cabinets?

A. tek screws
B. pan-head screws
C. galvanised screws
D. chipboard screws

Question 14

Which joint is used to join timber boards for a tabletop?

A. a biscuit joint
B. a rebate joint
C. a dovetail joint
D. a mortise and tenon joint

Question 15

Which ratio is used for marking out dovetail joints on a solid timber drawer?

A. 1:3
B. 1:4
C. 1:6
D. 1:10

Question 16

Which drill bit is used when constructing a leg and rail joint?

A. an auger drill bit
B. a dowel drill bit
C. a spade drill bit
D. a masonry drill bit

Question 17

Before sanding, which tool is used to shape the concave curve on the legs of a desk?

A. a spokeshave
B. a jointing plane
C. a cabinet scraper
D. a flat smooth file

Question 18

When making traditional furniture, which tool is used to duplicate an existing shape?

A. a mitre square
B. a sliding bevel
C. a sliding square
D. a profile gauge

Question 19

What is the function of the ball bearing in a roundover router bit?

A. It guides the width of the moulding.
B. It guides the depth of the moulding.
C. It balances the weight of the router bit.
D. It neatly finishes the end of the router bit.

Question 20

What part of a door is the stile?

A. the vertical component of the frame
B. the timber that is attached to the centre of the door to add strength
C. the block of timber that stops the door from swinging into the cabinet
D. the bead of timber that is placed at the back of the door to hold in the panel

END OF SECTION A
TURN OVER

SECTION B – Short-answer questions

Instructions for Section B

Answer **all** questions in the spaces provided.
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

Question 1 (16 marks)

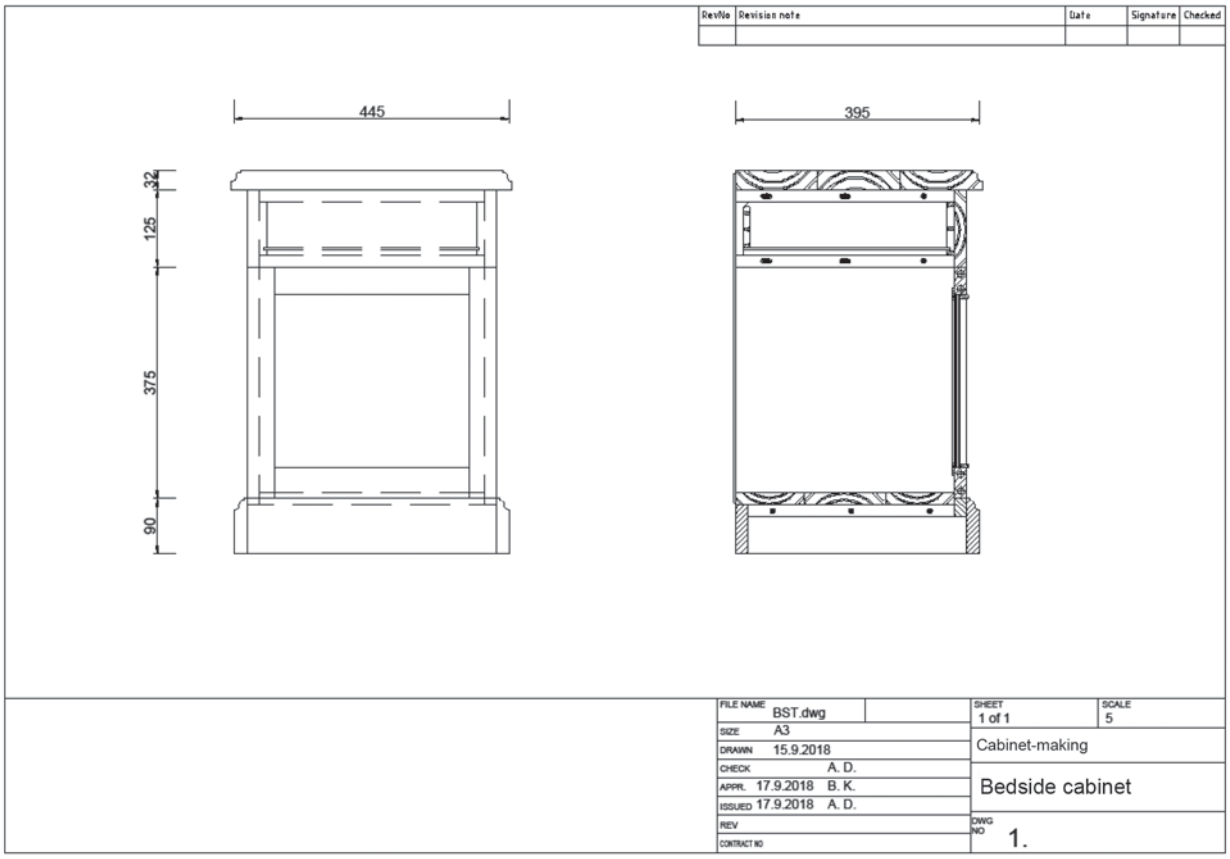


Figure 1

a. Complete a perspective sketch of the bedside cabinet in Figure 1 in the space below. 5 marks

b. A furniture-maker is required to calculate the machining cost to run an ogee profile to three sides of the bedside cabinet top and the plinth material. Machining the profile costs $25 per lineal metre.

What is the total cost to machine the ogee profile for 25 cabinets? Show your working. 3 marks

c. The furniture-maker has made 60 of the bedside cabinets. The delivery ute has a load tray that is 1.8 m long × 1.4 m wide. The cabinets can only be loaded in a single layer.

How many cabinets can the furniture-maker deliver with each load? 2 marks

d. The brass butt hinges for the bedside cabinet door are fitted with slotted brass screws.

Describe the process used to ensure that the screws are not damaged during construction. 2 marks

e. Back-sawn timber is used for the bedside cabinet top.

Give **two** reasons why back-sawn timber is used. 2 marks

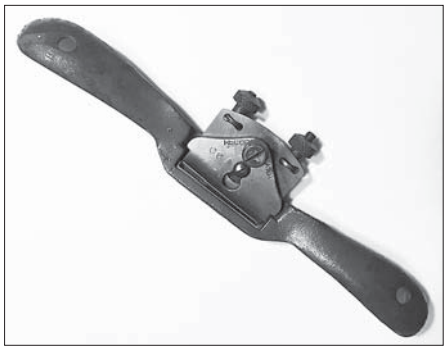
f. Describe **one** method of fixing the solid timber top to the carcase of the bedside cabinet. 2 marks

Question 2 (2 marks)

Explain how to check that a doorframe is square when gluing up.

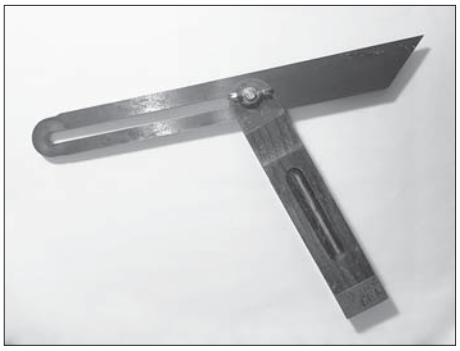
Question 3 (8 marks)

Identify the following tools. List one task for which each tool could be used.



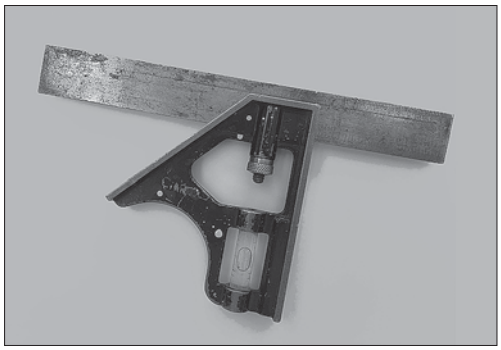
1. Tool _____

   Task _____



2. Tool _____

   Task _____



3. Tool _____

   Task _____

4. Tool _____

   Task _____

Question 4 (4 marks)

List four risk control measures taken to eliminate or to minimise the risk of chips and material flying into an operator's face when the operator is using a portable router.

1. _____

2. _____

3. _____

4. _____

Question 5 (2 marks)
In furniture-making, what is a chamfer and where is it most likely to be located?

Question 6 (2 marks)
When gluing, what are the two most common causes of twist or wind in a timber drawer?

Question 7 (2 marks)

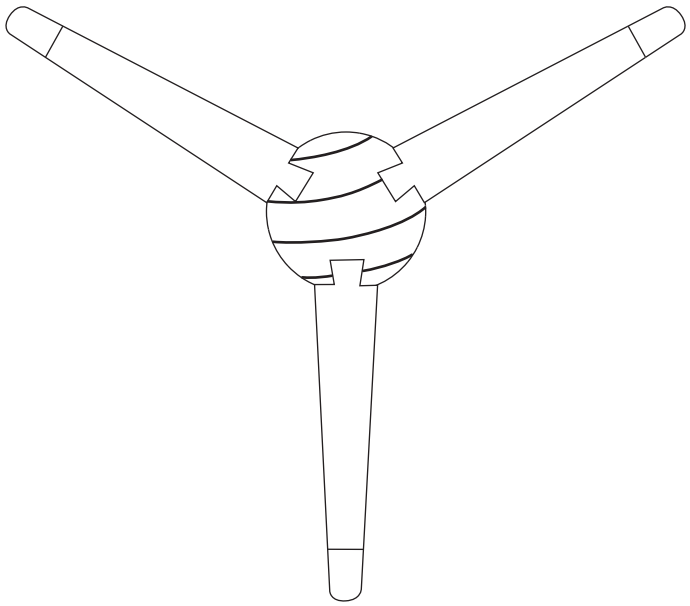


Figure 2

Figure 2 shows the base of a standard lamp, with three legs equally spaced and dovetailed into the centre post.

Calculate the angle between each leg.

Question 8 (2 marks)

Figure 3

A sander has the tag shown in Figure 3 attached to it.

Before using the sander, what must its operator do?

Question 9 (2 marks)

Describe the furnishing product known as an ‘ottoman’.

END OF SECTION B
TURN OVER

SECTION C – Case study

Instructions for Section C

Please remove the insert from the centre of this book during reading time.
Use the case study provided in the insert to answer the questions in this section.
Use explanatory diagrams, charts and sketches if you believe they will improve your answers.
Answer **all** questions in the spaces provided.
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

Question 1 (7 marks)
Complete the cutting list for the writing desk by filling in the missing information in the bold boxes.

Cutting list							
Item no.	**Item name**	**No. of pieces**	**Length (mm)**	**Width (mm)**	**Thickness (mm)**	**Remarks**	**Material**
1	top and bottom panels	2		274	22		Vic. ash
2	sides	2	1345	280	20		Vic. ash
3	division	1	1003	274	25		Vic. ash
4	horizontal division below drop-down desk	1		274	20	refer to specifications on division below drop-down desk	Vic. ash
5	horizontal divisions above and below bottom drawer	2	582	274	25		Vic. ash
6	bottom drawer division guides	2	274	90	20		Vic. ash
7	shelves	3	409	250			Vic. ash
8	shelf supports		250	16	20	cut on angle at front	Vic. ash
9	desk shelving	1	2448	140	6	cut lengths to size	Vic. ash
10	back	1	1364	1044	6		plywood
11	top back	1	1016	140	20	fixed to top using biscuit joints	Vic. ash
12	back top moulding	1	1094	60	25	18 mm chamfer	Vic. ash
13	side top moulding	2		60	25	18 mm chamfer	Vic. ash

Item no.	Item name	No. of pieces	Length (mm)	Width (mm)	Thickness (mm)	Remarks	Material
14	right door top rail	1	292	83	20	rebate on door edge to set door into carcase 3 mm × 14 mm depth	Vic. ash
15	right door bottom rail	1	292	107	20	rebate on door edge to set door into carcase 3 mm × 14 mm depth	Vic. ash
16	right door stiles	2		60	20	rebate on door edge to set door into carcase 3 mm × 14 mm depth	Vic. ash
17	small doors top and bottom rails	4	164	60	20	rebate on door edge to set door into carcase 3 mm × 14 mm depth	Vic. ash
18	small door stiles		419	60	20	rebate on door edge to set door into carcase 3 mm × 14 mm depth	Vic. ash

Note: Some items have not been included in this cutting list.

Question 2 (10 marks)
Complete the job plan for the writing desk by filling in the missing information in the bold boxes.

Section	Step	Tools/equipment required
preparation	Select and dress timber.	tape measure, docking saw jointer and thicknesser
carcase	Mark out and make widening joints.	
	Dress and cut to size sides, top, bottom, division and shelves.	
		tape measure, marking equipment, biscuit jointer and extractor
	Run rebates for back.	router, rebate cutter and extractor
	Dry run carcase assembly.	clamps, clamping blocks and tape measure
	Sand internal faces of carcase parts.	sandpaper and sanding block
	Glue carcase and check for square.	
	Check for square and fit back.	tape measure, drills, driver and screws
	Run crown moulding.	router, extractor and bevel bit
	Fit crown moulding.	
	Make and fit leg brackets.	
internal shelving behind drop-down desk	Measure and cut to size internal shelves.	tape measure, marking equipment and docking saw
	Mark out and make housing joints.	tape measure, marking equipment, router and extractor
	Sand all internal shelf parts.	sandpaper and sanding block
		clamps, clamping blocks and tape measure
	Glue shelves and check for square.	glue, clamps, clamping blocks, tape measure and rags
	Insert and fix shelf unit into carcase.	
drawers	Measure and cut to size drawer parts.	tape measure, marking equipment and docking saw
	Fit drawer parts to carcase.	
	Make drawer joints.	router, rebate cutter and extractor

Section	Step	Tools/equipment required
	Dry run and check fit of drawers.	clamps, clamping blocks and tape measure
	Glue and check for square and wind.	glue, clamps, clamping blocks, tape measure and rags
	Fit drawer bottoms.	

Note: Some steps have not been included in this job plan.

Question 3 (16 marks)

a. List one handmade joint that can be used to construct the doorframe. Provide two reasons for using this joint. 3 marks

Joint _____

Reason 1 _____

Reason 2 _____

b. The supports for the drop-down section of the writing desk need to be flush with the front face of the carcase.

What does the term 'flush' mean? 1 mark

_____

_____

c. How many shelves are behind the glass door of the writing desk? 1 mark

_____

d. What are the length and the width of the leadlight panel in the door of the writing desk? 2 marks

Length _____

Width _____

e. The desk doors and the drawers have a pencil round on the front outside edge.

Which tool is used to make the pencil round and what is the radius of the pencil round? 2 marks

Tool _____

_____

Radius _____

_____

f. What is the finest grade of sandpaper that can be used to prepare the surface of the desk for polishing? 1 mark

_____

g. A furniture-maker has been given the orthogonal drawing of the desk.

Which other document is required before the furniture-maker can start machining the timber for the desk? 1 mark

_____

h. What direction is the grain on the timber drawer fronts? Provide two reasons for using this direction of grain. 3 marks

Grain direction _____

Reason 1 _____

Reason 2 _____

i. When making the desk, at what stage during the production process should the drawer handles be attached? 1 mark

_____

j. When fixing butt hinges to the timber-framed doors, where should the hinges be placed? 1 mark

_____

Question 4 (7 marks)
Complete the hardware list by filling in the missing information in the bold boxes.

Number	Item description	Finish	Size	Quantity
1	teardrop handles for doors	antique bronze	100 mm	
2		antique bronze	to match doors	1
3	knobs for drop-down desk supports		18 mm diameter	2
4	lock for drop-down desk	brass	50 mm	1
5	escutcheon for drop-down desk	brass	to match key	
6	locks for doors	brass	50 mm	3
7		brass	19 mm × 6 gauge	8
8	butt hinges	brass	50 mm	
9	hinge screws		19 mm × 6 gauge	48
10	brads for fitting glass beading	steel	19 mm	100
11	screws for shelf supports	brass	32 mm × 8 gauge	18

END OF QUESTION AND ANSWER BOOK

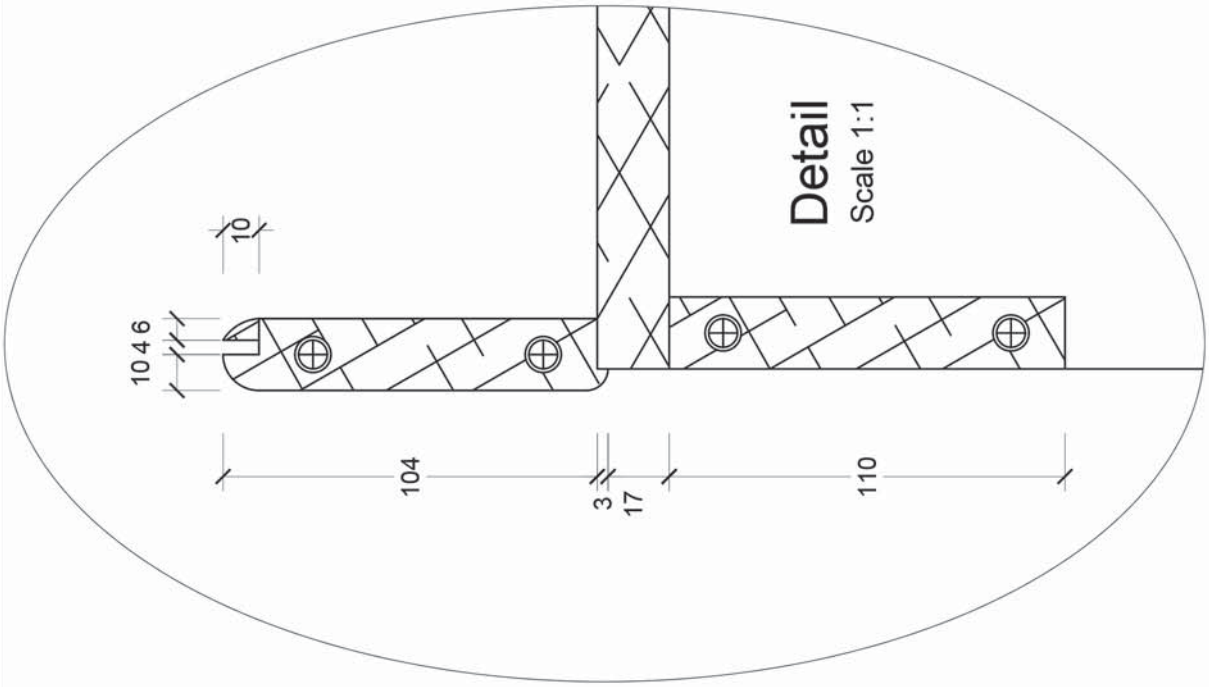
Insert for Section C

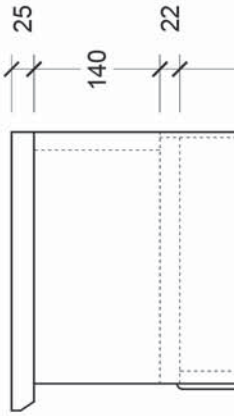
Please remove from the centre of this book during reading time.

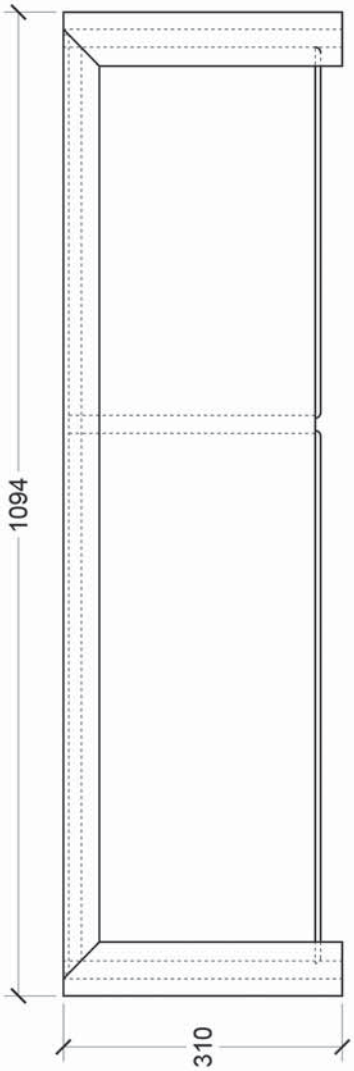
Read the following specifications in conjunction with the working drawing.

A client has requested a desk with the following specifications:

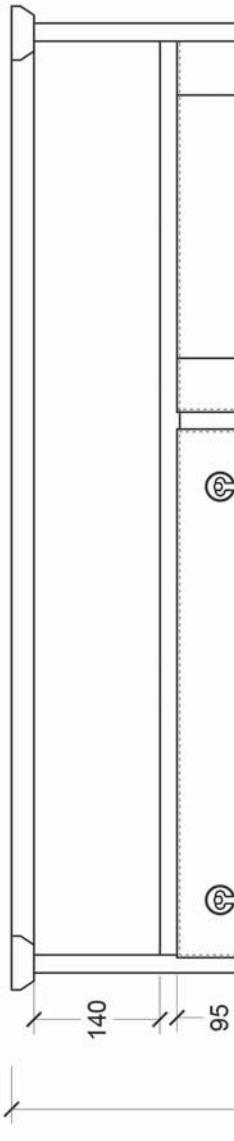
- all widening joints to be biscuit joints
- carcase to be joined using biscuit construction
- stiles and rails of doors to be connected using dowel construction
- leadlight door as shown on the drawing, leadlight to be provided by others
- leg brackets to be connected using dowel construction
- doors and drawer fronts to be rebated, stand 6 mm proud of the carcase and set in 14 mm
- a 6 mm half-round run along all front edges of the doors, drawers and drop-down desk
- behind the leadlighted door are three solid timber shelves 12 mm thick and fixed to the carcase by timber shelf supports
- supports for the drop-down desk to slide out from the cabinet to hold the drop-down desk when open
- front edge on the division below the desk to be scalloped to allow for the drop-down desk to rest on it when open and for it not to bind when opening and closing
- top drawer front to have 3 mm × 14 mm deep rebate at the back of the top edge and the side edges
- bottom drawer front to have 3 mm × 14 mm deep rebate on the side edges
- all doors to have 3 mm × 14 mm deep rebate, except on the hinge edge

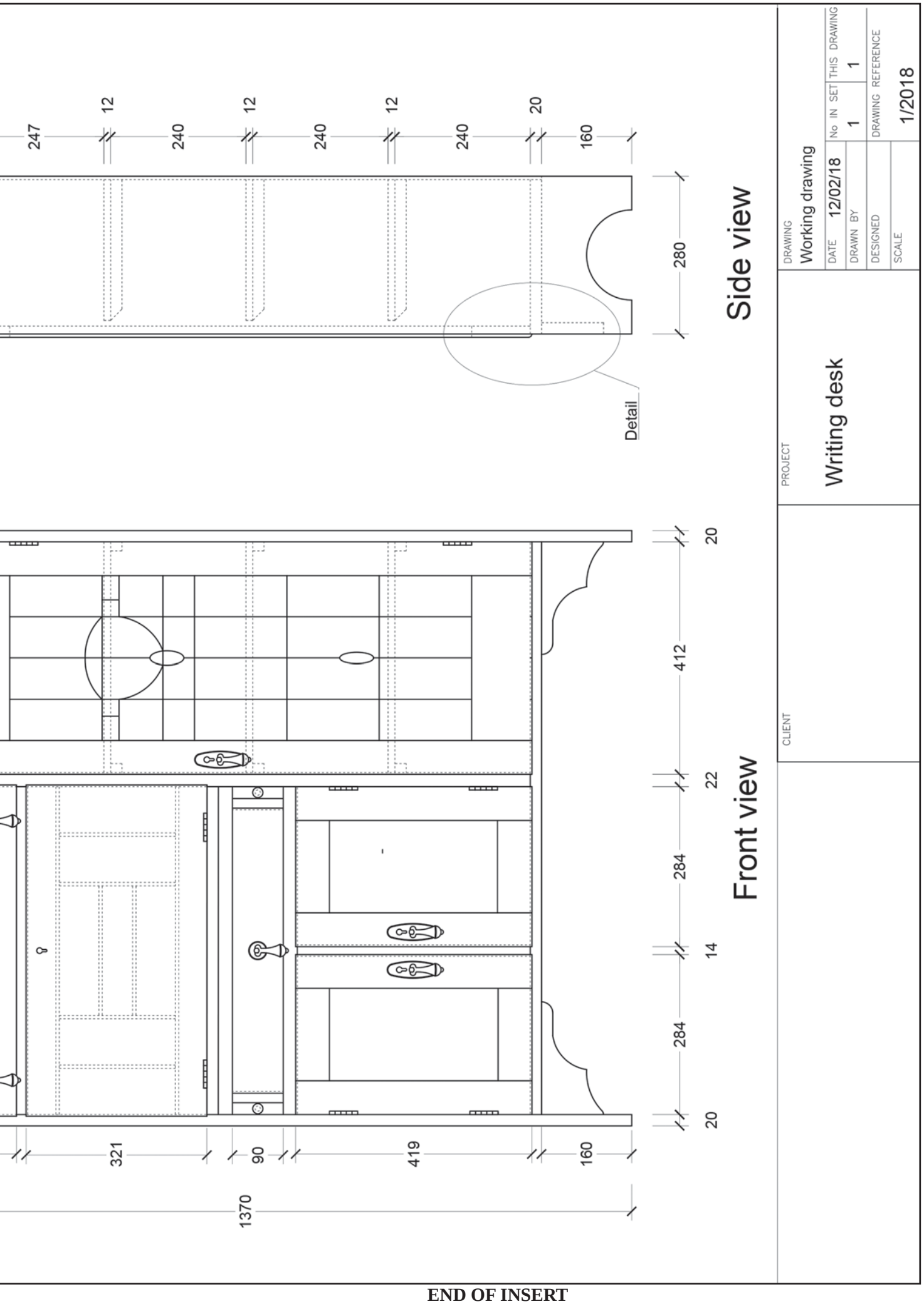






Plan





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