



Victorian Certificate of Education 2012

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Figures

Words

Letter

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VCE VET FURNISHING (CABINET MAKING)

Written examination

Monday 12 November 2012

Reading time: 11.45 am to 12.00 noon (15 minutes)

Writing time: 12.00 noon to 1.30 pm (1 hour 30 minutes)

QUESTION AND ANSWER BOOK

Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	20	20	20
B	23	23	50
C	3	3	30
			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 white out liquid/tape.

Materials supplied

- Question and answer book of 19 pages. There is a 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.
- 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.

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.

Question 1

The cutter in a handheld router rotates in a clockwise direction.

The safest direction to rout a drawer front is

- A. clockwise.
- B. right around.
- C. anticlockwise.
- D. either clockwise or anticlockwise.

Question 2

How should hands be placed when using an electric plane?

- A. Hold the tool with both hands on the rear handle.
- B. Hold the job with your left hand and the tool with your right hand.
- C. Hold the cord with your left hand and the tool with your right hand.
- D. Hold the rear handle with one hand and the forward knob with the other hand.

Question 3

When using a pendulum action jigsaw to cross-cut veneered particle board, which pendulum setting should be used?

- A. setting 1 – no pendulum action
- B. setting 2 – minimum pendulum action
- C. setting 3 – medium pendulum action
- D. setting 4 – maximum pendulum action

Question 4

When using a router to create a moulded edge on a solid timber tabletop, you should

- A. prevent burning and chipping by 'back cutting'.
- B. move the tool as slowly as possible to cut every part.
- C. move the tool as fast as possible to finish the job quickly.
- D. maintain an even speed to achieve a good finish and prevent burning.

Question 5

What is the recommended grinding angle range for plane blades and chisels?

- A. 15–19 degrees
- B. 20–24 degrees
- C. 25–29 degrees
- D. 30–34 degrees

Question 6

Which is the most appropriate clamp to use to glue planted mouldings to the face of several drawer fronts?

- A. G
- B. sash
- C. band
- D. spring

Question 7

For which furnishing item is leg and rail construction appropriate?

- A. a blanket box
- B. a wall cabinet
- C. a timber chair
- D. a kitchen cabinet

Question 8

A manufactured board that is made by gluing three or more sheets of veneer together is called

- A. plywood.
- B. HMR particle board.
- C. laminated plastic sheet.
- D. medium-density fibreboard.

Question 9

When checking whether the legs and rail are square, the most appropriate steps to take are

- A.
 - check whether there is twist and wind
 - check for the flatness of all components
 - check that the legs are parallel
 - check the diagonal measurement
- B.
 - check whether there is twist and wind
 - check that the legs are parallel
 - check whether all the excess glue has been removed
 - check the diagonal measurement
- C.
 - check for the flatness of all components
 - check whether cramping blocks have been used
 - check that the legs are parallel
 - check whether the legs have been measured accurately
- D.
 - check that the legs are parallel
 - check for the flatness of all components
 - check that the clamps are parallel to the rail
 - check the diagonal measurement

Question 10

When assembling the leg and rail section of a dining table, the dowels are driven into the

- A. rails before the legs.
- B. legs before the rails.
- C. dowel hole that has the most depth.
- D. dowel hole that has the least depth.

Question 11

A worker is assisting a cabinet-maker with installing a kitchen in a new house.

Which items of PPE should be worn on the job site?

- A. ear muffs, safety boots, overalls
- B. ear muffs, safety boots, high-visibility overalls
- C. ear muffs, safety glasses, safety boots, overalls
- D. ear muffs, safety glasses, overalls, gloves, high-visibility clothing

Question 12

What should be included in the title block of a plan?

- A. your name, the job address, the date of the plan
- B. the client's name, your name, the job address, your mobile number
- C. the time, the date, the location of your office/workshop, the job name
- D. the date, the job name, the person who created the plan, the plan scale

Question 13

Work plans are important workplace tools because they are

- A. what the employer uses to cost all projects.
- B. the most effective way to construct a project.
- C. the best assurance to the customer that work quality is guaranteed.
- D. the way that the employer communicates how things should be done.

Question 14

The most effective way of gluing and assembling legs and rails is to

- A. use sash clamps and waste blocks to prevent damage to the legs.
- B. use sash clamps and waste blocks to make sure the legs are parallel.
- C. apply waste blocks to enable the sash clamps to align both legs and rails.
- D. apply sash clamps and waste blocks to enable all excess glue to be squeezed out.

Question 15

An 8 mm radius 'rounding over' bit is used on both the top and bottom faces of a tabletop.

Which is the most appropriate router to use?

- A. hand router
- B. trimmer router
- C. heavy-duty router
- D. medium-sized router

Question 16

A cutting list is used as a guide to

- A. enable a set out to be drawn.
- B. machine all parts for a project.
- C. select tools needed for a project.
- D. provide the customer with job details.

Question 17

Which of the following is an imported cabinet timber?

- A. teak
- B. silky oak
- C. blackwood
- D. rose mahogany

Question 18

Face and edge marks are an industry-accepted way to indicate the

- A. edges to be shown.
- B. surfaces to be sanded.
- C. best surfaces of the component.
- D. sides to be stained and polished.

Question 19

What is one factor that should be considered when preparing a cutting list?

- A. the sketch supplied by the client
- B. the information provided by a co-worker
- C. a new pattern may need to be developed for the job
- D. the standard pattern used in the manufacturing process

Question 20

What is the purpose of a stretcher rail in the construction of a chair?

- A. to strengthen the construction
- B. to make the chair harder to build
- C. to square the legs during assembly
- D. to have somewhere for a person to put their feet

SECTION B – Short answer questions**Instructions for Section B**

Remove the insert from the centre of this book during reading time.
Answer **all** questions in the spaces provided.

Question 1

What are **two** control measures that can be used to limit noise in the workplace?

1 mark

Question 2

Before using a power tool, the operator should complete a safety check of the tool and power outlet.
List three checks that should be undertaken.

1. _____
2. _____
3. _____

3 marks

Question 3

Why are detailed sketches necessary on a working drawing?

1 mark

Question 4

Briefly explain why the choice of adhesives is important when planning to assemble furnishing components.

2 marks

Question 5

Complete the following list of steps to be taken when assembling an item of furniture.

1. *All components are available for assembly* _____
2. _____
3. *Relevant hardware is provided* _____
4. _____
5. *Quality check is undertaken to ensure that the furniture item meets the specification* _____

2 marks

Question 6

Figure 1 below is a drawing of a board with the measurements 1200 mm × 190 mm × 19 mm.

Sketch the face and edge marks on Figure 1.

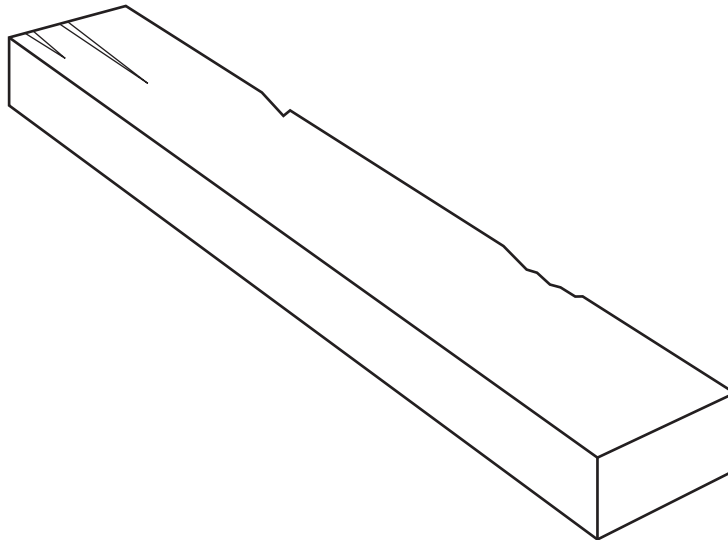


Figure 1

1 mark

Question 7

Figure 2 shows the perspective drawing of a solid timber top for a table.

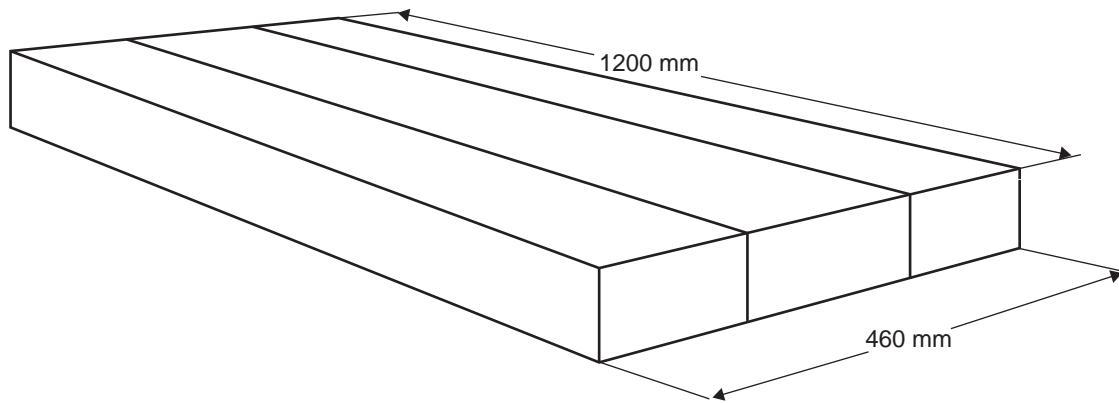


Figure 2

- a. Draw the end grain to indicate how you would position the boards to reduce cupping of the top. 1 mark
- b. If using radiata pine measuring 190 mm × 19 mm and 140 mm × 19 mm to construct the top, what combination of boards should you use to minimise wastage?

1 mark

- c. Name two types of joints that can be used in assembling the top.

1. _____

2. _____

2 marks

- d. Explain the process and equipment you would use after assembling the top, to prepare the top for finishing.

2 marks

Question 8

- a. List the components of a kitchen cabinet drawer made using melamine-faced particle board.

3 marks

- b. Which hardware would be used to attach the drawer to the carcass?

1 mark

Question 9

Explain how you would remove excess glue after assembling a project.

2 marks

Question 10

What causes corrugations when timber has been machined by a portable power planer or router?

2 marks

Question 11

Convert the following measurement.

4.560 metres = _____ mm

1 mark

Question 12

Calculate the total lineal metres for the timber listed below.

190 mm × 19 mm DAR radiata pine

4 / 2.8, 5 / 3.4, 6 / 2.1 metres

total linear metres = _____

3 marks

Question 13

List three pre-operational maintenance tasks for a cordless power drill.

1. _____
2. _____
3. _____

3 marks

Question 14

'Clip on' hinges are very common in kitchen and bathroom cabinets.

What is the advantage of using 'clip on' hinges?

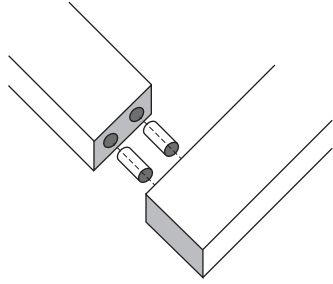
2 marks

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Question 15

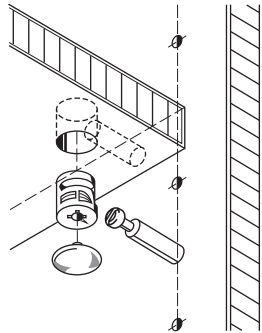
Identify the fixings in the diagrams below and explain how each one is used.

a.



2 marks

b.



2 marks

c.



2 marks

Question 16

You have been asked to make a tabletop from five pieces of timber.

Choose three pieces of equipment from the list below.

Explain how each piece of equipment is used during the process of making a tabletop.

- radial arm saw
- jointer
- thicknesser
- stroke sander
- biscuit jointer
- orbital sander

1. _____

2. _____

3. _____

3 marks

Use the Plan and specifications opposite to answer Questions 17–23.

Question 17

How many handles will the client need to provide for the finished chest of drawers?

1 mark

Question 18

Refer to the foot detail. What is the scale of the detail?

1 mark

Question 19

Using the dimensions in the plan, what is the width of the MDF infill panel for the top of the cabinet?

1 mark

Question 20

Which **two** details on the title block indicate that you are working on the final approved version of the plans?

2 marks

Question 21

Which timber is specified for the internal drawer parts?

1 mark

Question 22

What is the specified finish for the completed job?

1 mark

Question 23

Which part of the chest of drawers does the detail shown in Section A : A refer to?

1 mark

Plan and specifications

Section A : A

Foot Detail
Scale 1:5

R4 TYP

CUSTOMER SIGN OFF

Customer Signature	Date	Version No:	MATERIALS
Job Name	Chest of Drawers		Hardwood Frame
Order Number	123456		MDF Panels
Customer Name	Bob Best		Internal Ash Drawers
Address	123 Station Street		All screws to be countersunk and capped where showing
Contact Phone Number	0400123456		
Date	12/12/2012		

FINISH	EXTRAS
Black 50% Gloss - Pre catalysed Lacquer	
Clear 50% Gloss - Pre catalysed Lacquer	
HARDWARE	SITE CONDITIONS
Handles: to be delivered by client	Wall: N/A
Runners: Blum 560H Blumotion 480C	Floor: N/A
Shelf Pins: N/A	Skirting: N/A
Hinges: N/A	Cornice: N/A

ACE Furniture Manufacturing P/L

ACN - 123 456 78910
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END OF SECTION B
TURN OVER

SECTION C – Case study**Instructions for Section C**

Answer all questions in the spaces provided. Refer to the insert when answering Questions 1–3. Use explanatory diagrams, charts and sketches if you believe they will improve your answer.

Question 1

Complete the cutting list below and insert the correct description for each part of the jarrah hall table pictured in Figure 1 in the insert.

Cutting list for the jarrah hall table						
No.	Description	No. of pieces	Length (mm)	Width (mm)	Thickness (mm)	Remarks/ Timber
a	top	1	900	430	20	3/930 × 150 × 25 jarrah
b	leg	4	800	45	45	jarrah
c	shelf	1		370	20	3/870 × 150 × 25 jarrah
d	end rail	2	300	160	20	jarrah
e	back rail	1	770	160	20	jarrah
f	drawer rail	2	800	45	20	jarrah
g	drawer runner/kicker	4	295	45	20	ash
h	centre drawer runner/kicker	2	295	60	20	
i	drawer guide	2	340	27	20	ash
j	centre drawer guide	1		24	20	ash
k	drawer front	2	385	160	20 jarrah
l	drawer side	4		120	12	hoop pine grooved for ply
m	drawer back	2	337		12	hoop pine
n	drawer bottom	2	345	348		hoop pine plywood
o	pediment	1	860		20	tapered to pattern (see set out) – jarrah

8 marks

Question 2

- a. Use the cutting list you have just completed.
- Select the two components that require joining and set out a plan for both items.
 - Include measurements for both for the joining process.
 - Explain two joining techniques you would consider for each component.

Use the space below to describe the processes required.

component 1

component 2

6 marks

- b.** Calculate the cost of the two components from **part a.** if the material is purchased at \$7.85 per lineal metre.

total lineal metres _____

overall cost of components \$ _____

Use the space below to show your calculations.

3 marks

- c.** The component that sits flush with the back edge of the hall tabletop needs to be tapered to shape.
 - Name a power tool and two hand tools that are used to achieve the taper.
 - Describe how each tool is used to achieve the taper.

The power tool used is a _____ and it is used _____

The hand tool used first is a _____ and it is used _____

The hand tool used next is a _____ and it is used _____

6 marks

- d.** Describe how you would fit the pediment to the jarrah hall tabletop.

2 marks

Question 3

Construct a work plan using five steps in the correct order to **either**

- assemble the drawers for the jarrah hall table

OR

- assemble the carcass of the jarrah hall table.

1. _____

2. _____

3. _____

4. _____

5. _____

5 marks

Insert for Section C
Please remove from the centre of this book during reading time.

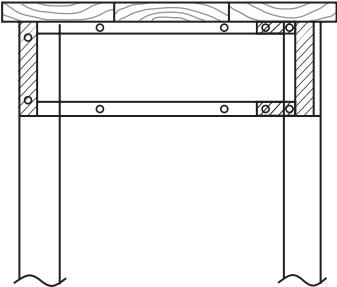
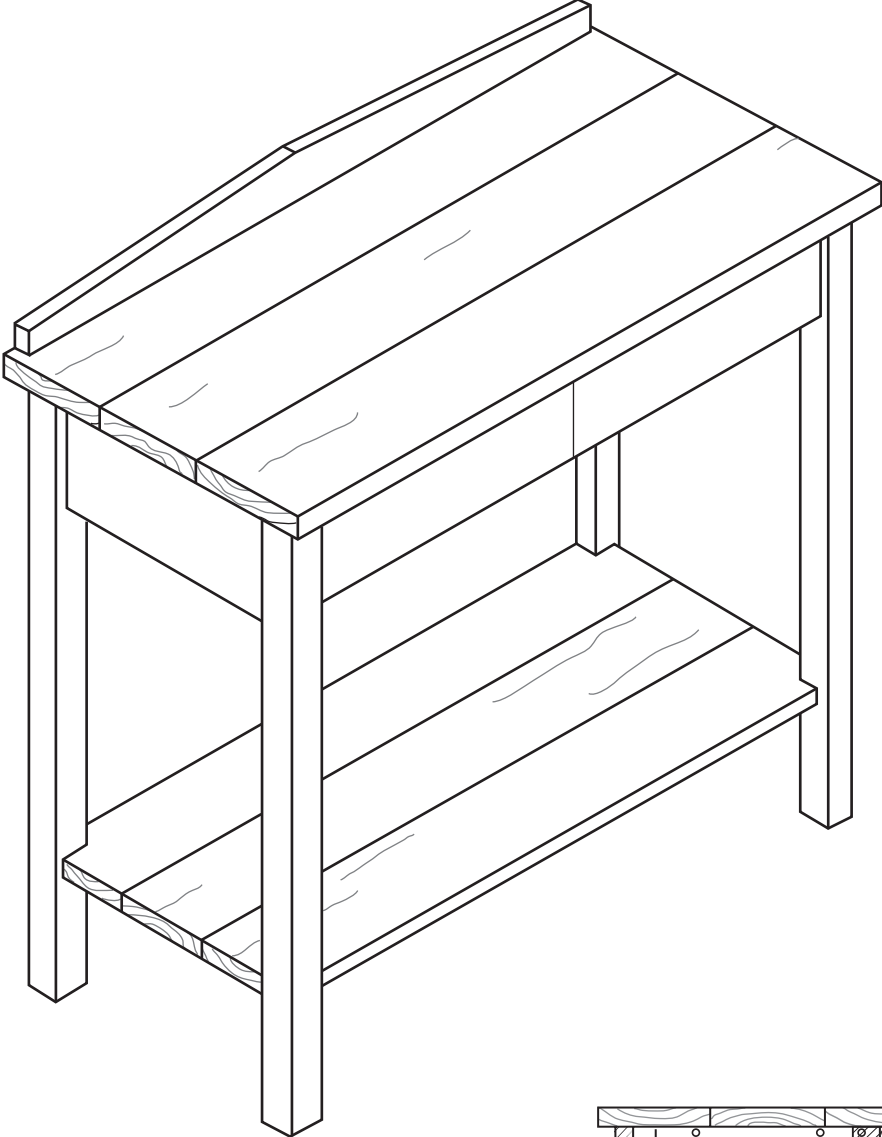


Figure 1

Specifications for the two-drawer jarrah hall table

- Overall size: 820 mm high × 900 mm long × 430 mm deep
- Legs are machined from jarrah timber and are dressed to 45 mm × 45 mm.
- Top is constructed from three boards, 930 mm × 150 mm × 25 mm sawn timber. Finished thickness for the top is 20 mm. The top overhangs 20 mm all round.
- The shelf is constructed from three boards of the same material as above and finished to the same thickness. The shelf is also constructed from three boards, 870 mm × 150 mm × 25 mm, and finishes 20 mm thick. The shelf is stepped back from the legs 10 mm all round and is attached to the legs 160 mm from the bottom of the leg.
- The end rails are set back 10 mm from the outside of the legs and are dowelled to the legs. These rails are machined to finish 160 mm × 20 mm.
- The back rail is finished flush with the back legs and is the same width and thickness as the end rails. It is also dowelled to the legs (refer to section drawing).
- The pediment is constructed from a piece of jarrah, 860 mm × 60 mm × 20 mm, and is tapered to 30 mm at each end and fixed to the top along the back edge of the top.
- Two jarrah drawer or blade rails are fitted and dowelled to the front legs and the inside of the end rails. Both top and bottom drawer/blade rails are set back 30 mm from the front of the legs and around the back of each leg to finish flush with the end rail. Both rails are then dowelled to the legs and the end rails. When the drawers are fitted, the face surface of each drawer will also stand back 10 mm from the front of the legs to match the stand back of the end rails. These rails are 45 mm × 20 mm in section.
- The top and bottom drawer runners/kickers are machined using ash timber and are finished 45 mm × 20 mm. They are cut around the back leg to finish against the inside of the back rail and hard against the inside edge of the drawer/blade rails. They are then fixed to the inside end rails. All drawer runners, kickers and guides are machined from ash timber.
- The centre drawer runner and kicker are machined 60 mm × 20 mm and 'biscuit' jointed to both the back rail and the drawer/blade rails.
- A 24 mm × 20 mm drawer guide is fixed to the drawer runner.
- The end drawer guides are fixed to the drawer runners against the inside of the ends and around the back leg to finish against the back rail. The front part of the drawer guide is also cut around the inside of the front leg to finish flush with the front edge of the drawer rail.
- The drawer fronts are cut from a piece of jarrah, 800 mm × 160 mm × 20 mm, so that both drawer fronts match in the grain.
- The drawer sides are to finish 5 mm short of the inside face of the back rail to enable the drawer fronts to close against the drawer/blade rails. The drawer sides have a 4 mm × 4 mm slot and are machined 12 mm to the top of the groove from the bottom edge of the drawer side to house a plywood bottom. The drawer front groove is the same and aligns with the drawer side groove. The drawer sides are dowelled to the drawer fronts and biscuit jointed to the drawer backs.
- The drawer backs are rounded over along the top edge and finish 6 mm down from the top edge of the drawer side.
- Drawer bottoms are fitted to the drawer after the drawer has been fitted to the carcass and the drawer is running freely. The ply bottom can be either screwed or pinned to the bottom edge of the drawer back.

END OF INSERT FOR SECTION C