



**2013**

**VCE VET Furnishing GA 3: Written examination**

## **GENERAL COMMENTS**

The 2013 VCE VET Furnishing examination assessed students' knowledge of the competencies they had studied in Units 3 and 4 as part of the VCE VET Furnishing program.

The examination was based on the revised group of units of competency. Refer to the examination specifications and sample questions on the VCAA website.

Students were generally able to respond to the practical elements of the examination, but need to concentrate more on some of the theoretical aspects of the program.

To approach items such as those in Section C successfully, students are encouraged to imagine themselves in a real work environment. Most students were able to grasp the concepts proposed and apply the knowledge they had gained during the year. Students are reminded that although they might not have experienced the exact nature of the scenario provided, they should apply the skills they have acquired in their work throughout the year to the scenario given. Some students did not carefully read all the details provided in the scenario. Students are reminded that in real-life workplaces there are no shortcuts when completing work. To work effectively when measuring for jobs, it is imperative that students have a fundamental mastery of arithmetic.

### **Areas of strength**

- completing a cutting list

### **Areas of weakness**

- basic mathematics (calculations, dimensions, costing, etc.)
- hardware selection and construction knowledge
- generalised and basic work plans
- understanding of Australian standards

When completing the examination, students should

- pay attention to the key words and the details in the instructions. Some students did not read the key words in the questions, and therefore did not answer all parts
- use the information in the examination insert more constructively
- draw and/or write on diagrams if this assists them in determining their answers
- make full use of the blank sections of the examination for completing draft work.



## SPECIFIC INFORMATION

This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding errors resulting in a total less than 100 per cent.

### Section A – Multiple-choice questions

The table below indicates the percentage of students who chose each option. The correct answer is indicated by shading.

Question	% A	% B	% C	% D	% No Answer
1	73	12	11	4	0
2	14	62	8	16	0
3	41	12	5	43	0
4	7	85	2	5	1
5	1	2	5	92	0
6	14	31	47	9	0
7	18	67	8	7	0
8	2	0	57	40	1
9	8	61	4	27	0
10	6	50	34	11	0
11	50	6	32	12	0
12	11	37	13	40	0
13	71	0	2	27	0
14	30	17	1	51	1
15	20	11	61	8	0
16	2	20	14	64	0
17	31	25	34	11	0
18	3	5	67	25	0
19	31	16	7	47	0
20	31	45	17	7	1

### Section B – Short-answer questions

Students who had good knowledge and practical skills performed well in this section of the examination. Many students used appropriate industry terms and concepts and had good understanding of the program. Where appropriate, responses were supported with examples and students addressed all parts of the questions.

Calculations seemed to cause problems for some students. Students need to practise basic mathematical concepts such as calculating costs relating to materials and sizes.

#### Question 1

Marks	0	1	2	3	Average
%	5	19	51	24	2

Way of improving environmental efficiency in a workshop include

- purchasing of materials: purchase materials from a sustainable resource; use recycled timber
- electricity: minimise the use of power tools for production processes. (Switching off power tools when not in use was also acceptable.)
- off cuts: re-using material waste where possible; machines having computer chips built in to reduce waste (for example, sheet metal tools).

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## Question 2

Marks	0	1	2	Average
%	70	24	6	0.4

The arris is removed from the bottom of the legs and bases of furniture to prevent splitting, breakage, etc. in terms of damage to the furniture and/or floor.

## Question 3

Marks	0	1	2	Average
%	30	52	18	0.9

Taking Occupational Health and Safety (OH&S) considerations into account, Karen should (two of)

- switch off any electrical equipment; for example, the saw
- use standard OH&S lifting procedures such as straightening the back and bending the knees
- find a trolley/trolley jack to be used for lifting the cabinets.

## Question 4

Marks	0	1	2	Average
%	57	7	36	0.8

The grade of abrasive paper that should be used is between 80 and 120 because the lighter grades do not adequately remove machine marks.

## Question 5

Marks	0	1	2	Average
%	60	14	26	0.7

Tool: smoothing plane/jack plane.

Justification: When you drill into the end grain, it is very difficult to finish the rail slightly above the end of the leg. It is harder to plane the top of the leg (end grain). It also does not match because it is done by the hand and eye. It is better to plane the rail down to the top of the leg (less potential damage).

## Question 6

Marks	0	1	2	Average
%	78	20	1	0.3

- The broken lines represent where the door is hinged (this is always on the vertical side). The three lines on the top left-hand corner and the bottom right-hand corner indicate that this is glass.
- Hinging/hinging direction – first two doors open to the left, third door to the right-hand side.

## Question 7

Marks	0	1	2	3	Average
%	10	36	42	12	1.6

The steps that need to be taken before the bedside table is ready to be polished are as follows.

1. Remove all pencil marks/may need to remove some hardware and/or components.
2. Remove any dints/fill any holes/pre-fit handles/remove dust.
3. Final sanding.

## Question 8a.–d.

Marks	0	1	2	3	4	Average
%	5	7	20	38	30	2.8

### 8a.

Three pairs/three sets of drawer runners are required.

Answers of 'six individual drawers' were not accepted.

### 8b.

The overall dimensions of the legs are: 112 mm × 46 mm × 46 mm.

### 8c.

Maple is the colour of the finish to use for the completed job.

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8d.

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## Question 9

Marks	0	1	2	Average
%	66	23	11	<b>0.5</b>

When sourcing wood, the term 'traceability' means stages of production tracked from forest, processing to retail sales. Traceability also indicates that the place where the timber was produced can be clearly identified or verified that it is from a sustainable source.

## Question 10

Marks	0	1	2	3	Average
%	17	20	37	26	<b>1.7</b>

Documents that a team leader should provide to team members to ensure that the cabinets are correctly assembled include (three of)

- set-out list
- list of components/hardware/cutting list
- assembly procedure list/instructions
- assembly log
- customer order
- product order number
- drawing
- current version of plans.

## Question 11

Marks	0	1	2	Average
%	35	42	24	<b>0.9</b>

The documents that can be used to determine the details of the component are

- a cutting list
- a working/assembly drawing.

## Question 12

Marks	0	1	2	3	4	Average
%	32	26	25	12	5	<b>1.4</b>

1	<i>Check all parts are correct and all hardware is available</i>
2	Log all parts out
3	<i>Join one side to the bottom</i>
4	Join other side to the bottom
5	Fit top rails and secure (Note: top is fitted at later stage)
6	<i>Fit back and 'square up' cabinet</i>
7	Fit and adjust the door

## Question 13a.–d.

Marks	0	1	2	3	4	5	Average
%	38	40	16	4	1	0	<b>0.9</b>

This question was not answered well.

13a.

Seven parts were required for this cabinet.

13b.

White\_HMR\_PB\_16 mm means

- the material used is colour white melamine
- high moisture resistant (HMR)

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- particle board (PB)
- 16 mm in thickness (or a standard thickness).

### 13c.

The edge tape the operator is asked to apply is 1 mm (thick) × 22 mm (wide) and colour (white).

### 13d.

The edge of the panel to which the edge tape should be applied is 1L (long edge).

### Question 14

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
%	100	0	<b>0</b>

The steps indicating the correct method for sharpening a damaged plane blade are as follows.

Method	Step
Grind blade to the correct angle	4
Reassemble blade and backing iron	8
Square blade on a bench grinder	3
Undo the cap screw from the backing iron	2
Strop blade until all traces of burr are removed	7
Hone back of blade on a sharpening stone	6
Remove plane blade and cap iron from plane	1
Hone angle on bevel back and forth until burr is removed	5
Replace cap iron and blade in body of plane and adjust	9

Students found this question quite challenging.

### Question 15

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
%	48	41	9	2	<b>0.7</b>

Type of joint	Example of where this joint may be used
<i>butt joints</i>	<i>tabletops</i>
corner joints	carcase
intermediate joints	carcase/division in cabinet; muntin on door frame
mitre joints	picture frame/tabletop/door frame

### Question 16

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
%	70	22	8	<b>0.4</b>

The markings on the drawer sides indicate one front and left and right sides to enable an accurate fit.

### Question 17

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
%	24	29	34	13	<b>1.4</b>

Tool: mortise gauge

Use: used to mark

- two parallel lines for further hand or machine joint construction
- double dowel joints; mortise and tenon joints
- the mortise gauge saves time and can be more accurate to use.

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## Section C – Case Study

### Question 1a.

Marks	0	1	2	3	4	5	6	7	8	9	10	Average
%	11	10	11	14	16	15	8	8	6	0	0	3.7

Cutting list for the ash library chair					
Item	Description	No. of pieces	Length (mm)	Width (mm)	Thickness (mm)
a	back leg	2	1095+	To pattern	38
b	front leg	2	443	38	38
c	front seat rail	1	412	55	32
d	back seat rail	1	355	55	32
e	side seat rail	2	321	55	32
f	corner block	4	1 @ 560	60	30
g	top rail	1	355	90	22 cut parallel to pattern from 90 × 45
h	intermediate back rail	1	355	60	22 cut parallel to pattern from 60 × 45
i	centre back slat	1	405	70	15
j	back slat	2	405	40	15
k	front/back seat frame	2	1 @ 412+ 1 @ 355+	57	20
l	seat frame side rail	2	330	57	20
m	side stretcher rail	2	420	32	28
n	cross stretcher rail	2	1 @ 447 1 @ 429	38	20

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1b.

Marks	0	1	2	3	Average
%	85	14	1	0	0.2

Back legs = 1500 mm × 150 mm × 50 mm

Seat frame = 1430 mm × 75 mm × 25 mm

Back slats = 810 mm × 50 mm × 15 mm

1c.

Marks	0	1	2	3	Average
%	36	34	24	6	1

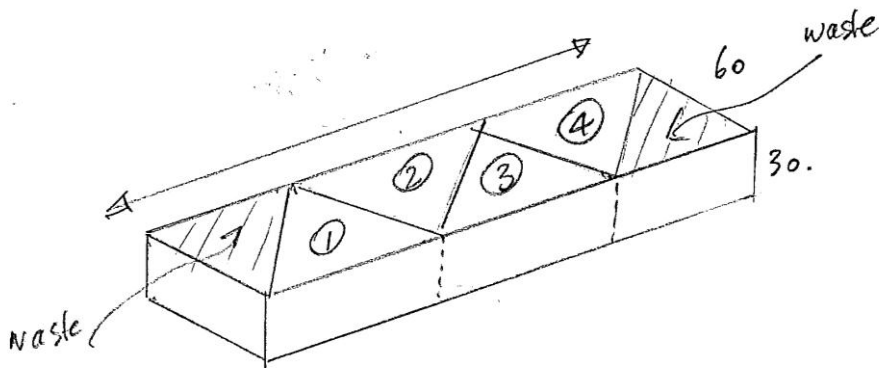
The components on the cutting list in part a. that would be suitable to 'nest' were

- (a) back leg
- (g) top rail
- (h) intermediate back rail.

1d.

Marks	0	1	2	Average
%	84	9	7	0.2

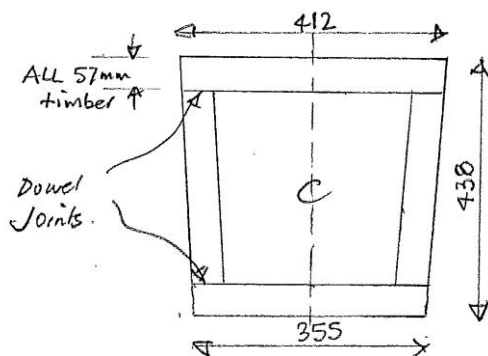
The following drawing shows how by 'nesting' the four blocks from this piece of timber will be obtained. Students were required to provide dimensions in their diagrams. A sample response is as follows:



1e.

Marks	0	1	2	3	4	Average
%	78	13	6	3	0	0.4

A sample response for the plan view of the seat frame to be upholstered in leather is as follows.



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## Question 2

Marks	0	1	2	3	4	Average
%	55	18	15	10	1	0.9

Students were required to describe, in five steps, their work plan for constructing the ash library chair.

A suggested answer is as follows.

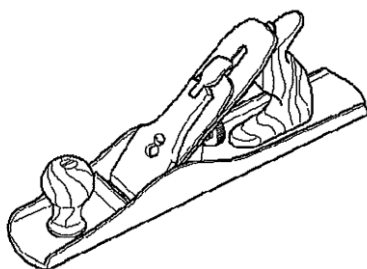
1. Glue/clamp front legs and all rails
2. Glue/clamp back legs and all rails
3. Glue/clamp front and back using all side rails
4. Square up frame
5. Screw and glue corner blocks in place; recheck for square

## Question 3

Marks	0	1	2	3	4	5	6	7	8	9	Average
%	2	3	6	11	13	15	22	11	12	5	5.3

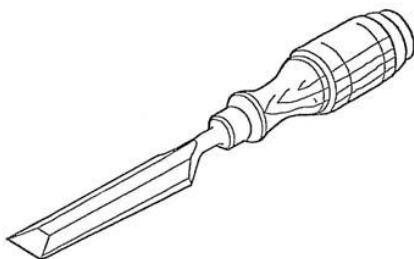
Students were required to

- identify each tool
- state how is each tool used when making a chair
- suggest how to ensure that the tools are in working order.



1.  
Jack plane (smoothing plane was also accepted)
  - to make front/side rails flush with front legs
  - keep plane blade sharpened and set correctly

2.



Bevel-edged chisel/chisel

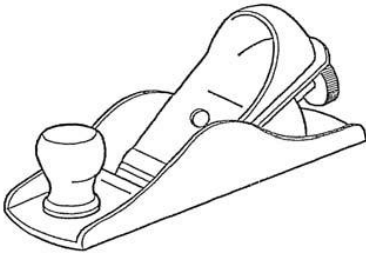
- chisel a mortise, fine fit a mortise and tenon joint
- keep sharp by the sharpening process (grinding and honing)



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3.



Block plane

- used for fine finishing and removing the arris on edges of timber, chair parts, cleaning up before sanding
- keep sharp and make sure adjustment for fine shavings, etc.