



GENERAL COMMENTS

The questions on the 2012 VCE VET Furnishing examination assessed students' underpinning knowledge of the competencies they had undertaken in Units 3 and 4 as part of their VCE VET Furnishing program.

Area of strength

- completing a cutting list

Areas of weakness

- basic mathematics (calculations, dimensions, costing, etc.)
- hardware selection and construction knowledge
- work plans – often too generalised and basic
- an inability to describe using diagrams
- an inability to articulate answers

Teachers and students are advised to view appropriate questions from past examinations and assessment reports as these provide very useful resources and indicators of the kinds of tasks students will be required to complete during the assessment process. It will also help students to gain a better understanding of the kinds of answers required for this examination.

Trainers/teachers should note that the 2013 Furnishing examination will be based on a revised group of units of competency. Please refer to the examination specifications and sample questions on the VCAA website.

SPECIFIC INFORMATION

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	50	5	40	5	0
2	4	3	2	91	0
3	19	34	40	7	1
4	6	2	2	91	0
5	14	45	29	12	0
6	44	36	15	5	0
7	0	5	90	5	0
8	54	26	4	15	1
9	49	12	8	31	0
10	25	44	18	13	0
11	5	5	49	40	0
12	10	29	6	55	0
13	0	49	12	39	1
14	47	23	20	10	0
15	42	28	9	22	0
16	14	65	9	11	1
17	32	20	16	33	0
18	18	19	55	8	0
19	38	15	24	22	1
20	79	2	19	1	0



Section B – Short-answer questions

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

Students who had a good understanding of underpinning knowledge as well as practical skills succeeded in this section of the examination. In the more successful responses, students wrote succinctly, using appropriate industry terms and concepts, and demonstrated a clear understanding of various aspects of the program. Explanations were supported by examples and addressed all parts of each question. However, a number of students experienced difficulty with basic calculations. Some students did not seem to pay attention to the key words in the questions, preferring to answer the questions without due consideration. These students were not able to achieve high marks.

Question 1

Marks	0	1	Average
%	45	55	0.6

Control measures for limiting noise in the workplace could include (any two of)

- controlled use of PPE/isolation
- minimise exposure to noise (for example, the length of time exposed)
- consolidated use of machinery/ensuring machinery has baffles installed
- substitution/use a different machine
- ear muffs/ear plugs
- isolation of machinery/machines to separate area.

Question 2

Marks	0	1	2	3	Average
%	4	19	35	41	2.1

Checks to undertake before using power tools could include (any three of)

- check cords and switches (frayed cords/damage to cords)
- safety guards in place
- presence of water
- whether tools are insulated or not
- evidence of equipment having been tested (for example, tagged/current tag indicating tests have been done on equipment).

Question 3

Marks	0	1	Average
%	60	40	0.4

Either of

- to include specific/finer details that are not evident on a general plan; for example, so that cutters/machine tools can be ordered to create the necessary details
- to ensure accuracy of production/to enable the most appropriate production methods to be used.

Question 4

Marks	0	1	2	Average
%	55	28	17	0.6

Students were required to mention two of the following answers in order to obtain two marks.

- drying time/consideration of drying time/cure time
- strength of the glue
- appearance – clear finish/stains timber or finish of the adhesive
- safety (for example, non-toxic adhesive)
- cost of adhesives
- moisture resistant or waterproof where necessary

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The type of adhesive used can be an important factor. For example, if a large carcass is put together with PVA glue on a 30-degree day, problems may ensue because glue is not strong enough for the project and is susceptible to heat. Therefore, the assembly stages may need to be revised to cater for the issues in assembly planning.

Question 5

Marks	0	1	2	Average
%	40	40	20	0.8

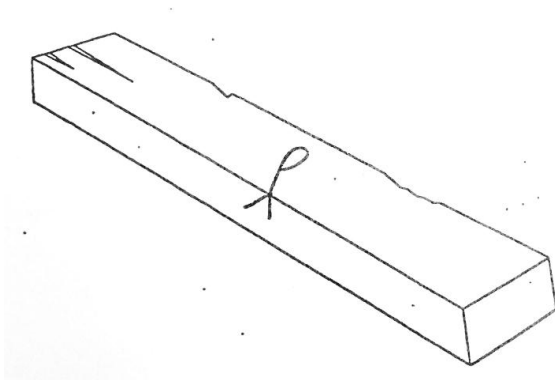
The correct steps were

- 1. All components are available for assembly.
- **2. All equipment, jigs and fixtures are available.**
- 3. Relevant hardware is provided.
- **4. Components are prepared, assembled and fitted/checked for twist and wind and/or square.**
- 5. Quality check is undertaken to ensure that the furniture item meets the specification.

Students provided many different answers to this question. A range of specific and more general responses was accepted, as long as students demonstrated that they understood the process. The order needed to be correct for marks to be awarded.

Question 6

Marks	0	1	Average
%	79	21	0.2



This question was answered quite poorly, and many students did not seem to have learned the industry requirements for correctly putting face and edging marks on a board. Some students, for example, placed face and edge marks back to front or at the end of the diagram. Many students 'dimensioned' this, but this was not what was asked in the question.

Question 7a–b.

Marks	0	1	2	Average
%	34	49	18	0.9

7a.

Some students drew quartersawn boards, whereas others drew backsawn boards and a reversing heart up, heart down sequence. Both were accepted as the tabletop did not indicate which was the top and which was the bottom.

7b.

2 @ 140mm and 1 @ 190mm

The question specifically referred to minimising waste.

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Question 7c–d.

Marks	0	1	2	3	4	Average
%	7	11	43	28	12	2.3

7c.

Any two of

- biscuit joint
- dowel joint
- machine joint
- butt joint
- tongue and groove joint
- slip-tongue joint.

Students were generally able to respond successfully to this question.

7d.

Need to flatten the top using a plane to traverse the top, then a thicknesser (or panel planer) to dress both sides and then rip until parallel and then square off the top length.

The correct answer needed to include the following points.

- cut top to finished size
- use thicknesser on both sides

Students also needed to mention one of the following.

- cross-sand/traverse with a plane/sand with the grain to flatten top/plane in a traverse fashion
- rip to width and cut to length
- after glued, remove dry glue with scraper (students had to mention what equipment they wanted to use and get ready for next process)/cross finish and finish with the plane
- use a belt sander

Students were asked to explain the process and the equipment they would use. However, many students did not answer the question in the context given, for example, by going straight to the finishing aspect of completing the top when the question did not ask for this. Other students produced partial answers or gave responses that demonstrated limited industry knowledge.

Question 8

Marks	0	1	2	3	4	Average
%	47	14	7	21	11	1.4

8a.

Correct responses included (any three of)

- two drawer sides: back and front/make box
- applied front base (screwed from the back)
- usually made of white laminated board and a solid bottom
- fixed with metal drawer front.

8b.

‘Metal’ or ‘plastic’ and/or ‘full extension’ types were acceptable drawer runners.

Question 9

Marks	0	1	2	Average
%	14	57	28	1.2

Acceptable answers needed to include water/glue control and plane blade/chisel to ‘clean glue away from corners’. To gain full marks, students were expected to use two of the following.

- use glue control methods
- use a damp, wet rag/cloth or paper towel to remove glue if solid timber or veneer
- wet all areas after removing glue to prevent patches or watermarks when polished

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- leave excess if not too much and, with a chisel, remove after drying/use a sharp chisel or plane blade to clean glue away from corners

Students produced a variety of correct answers to this question.

Question 10

Marks	0	1	2	Average
%	73	12	15	0.4

The corrugations are caused either by (any two of)

- blunt cutters
- the portable power planers being pushed beyond their capacity/beyond the machine's capability
- the feed rate.

Question 10 presented problems for many students.

Question 11

Marks	0	1	Average
%	34	66	0.7

4.560 metres = 4560 mm

The basic conversion required generally proved to be a problem for students. Students must learn basic calculations to prevent unnecessary wastage and costs.

Question 12

Marks	0	1	2	3	Average
%	80	3	1	16	0.6

190 × 19 mm DAR Radiata Pine

4 × 2.8 + 5 × 3.4 + 6 × 2.1 metres

= 11.2 + 17.0 + 12.6

= 40.8 total linear metres

Question 13

Marks	0	1	2	3	Average
%	16	28	28	28	1.7

Any three of the following were accepted for full marks.

- keep machine dust-free/ensure drill chuck is clear of chips/dust
- keep drill bits sharp and replace as necessary
- keep battery/battery pack charged/check battery is fully charged
- correct storage

Three legitimate ideas were needed when answering this question.

Question 14

Marks	0	1	2	Average
%	51	30	19	0.7

For full marks, students were required to refer to installation and adjustment. Some students referred only to installation or adjustment, but not both. A possible answer was: the hinge can be affixed as two separate features; doors can be fitted into place/doors can be removed for onsite installation.

Alternative answers that were also accepted included

- the doors can be unclipped if necessary
- easy adjustment of doors
- reduce installation time, easily fitted and removed
- adjustment is unaffected
- can remove them for polishing
- they can be purchased to open at various degree settings; for example, at 110 or 170 degrees.

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Question 15

Marks	0	1	2	3	4	5	6	Average
%	9	22	32	16	14	6	1	2.3

15a.

Dowel and joint: permanent – glued; wet fixing; dowels are used for assembling a door frame; used for leg and rail construction

15b.

Dowel and cam: temporary – can be assembled and disassembled; can be used to construct flat pack furniture; used to assemble a cabinet side and shelf; dry fixing

15c.

Screw and cross dowel: used to assemble a leg and a rail; used on an end and a rail on a cabinet; knock down fitting – used for assembling and disassembling (for example, Ikea furniture)

Question 15 was not very well answered as many students did not adequately address both parts of the question by writing the appropriate title and explaining how the fixing is used.

Question 16

Marks	0	1	2	3	Average
%	4	9	20	68	2.5

Answers included

- radial arm saw – to cut length of timber to approximate size/to cut or dock timber to a workable length
- jointer – to straighten one face and edge/to create face-to-face and/or edge-to-edge on timber for joining purposes
- thicknesser – to machine timber to finished size and parallel to both jointed face and edge
- stroke sander – to flatten, cross sand and finish board with the grain
- biscuit jointer – to biscuit join/edge-join boards for assembly/to cut slots in edge of boards to align and add strength when gluing, substitute for dowel or other type of edge joint
- orbital sander – for finish sanding using fine grit type(s) 120 grit and up to 320 grit paper.

Students were not asked for a sequence. The order of the answer therefore did not need to be taken into consideration.

Question 17

Marks	0	1	Average
%	32	68	0.7

Ten handles are needed because there are ten drawers.

Question 18

Marks	0	1	Average
%	11	89	0.9

One to five (1:5)

Question 19

Marks	0	1	Average
%	98	2	0.0

511 mm

Students seemed to struggle with the term ‘width’, often confusing it with ‘length’.

Students’ success in answering Questions 17–19 was mixed. Students who were well-prepared and sourced their answers from the insert did not struggle, whereas others found this to be quite challenging.

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Question 20

Marks	0	1	2	Average
%	41	27	32	0.9

Any two of

- customer signature
- date
- version number.

Question 21

Marks	0	1	Average
%	21	79	0.8

Ash

Question 22

Marks	0	1	Average
%	65	35	0.4

The specified finish for the completed job was black 50% gloss and clear 50% gloss – all pre-catalysed lacquer.

Many students omitted the term 'pre-catalysed'. The parameter specified in the question ('finish') required the word 'pre-catalysed' in the answer. If students only wrote 50% gloss and 50% clear, they were not awarded any marks.

Question 23

Marks	0	1	Average
%	53	47	0.5

The (cross) section of the top/MDF infill panel and moulding/trim/surround/outside section/top frame



Section C – Case study

Question 1

Marks	0	1	2	3	4	5	6	7	8	Average
%	13	18	27	23	14	4	2	0	0	2.3

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	840	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	ash
i	drawer guide	2	340	27	20	ash
j	centre drawer guide	1	340	24	20	ash
k	drawer front	2	385	160	20	1/800 × 160 × 20 or 800 × 160 × 20 jarrah
l	drawer side	4	345	120	12	hoop pine grooved for ply
m	drawer back	2	337	102	12	hoop pine
n	drawer bottom	2	345	348	4	hoop pine plywood
o	pediment	1	860	60	20	tapered to pattern (see set out) – jarrah

Students struggled to achieve full marks for this question.

Question 2a.

Marks	0	1	2	3	4	5	6	Average
%	51	9	14	11	6	3	7	1.5

For two marks, students had to identify the two component examples and draw the two plans. They then had to include length and width measurements on both plans, and explain the joining process. This was done well by some students, but others struggled.

Students had to select the two components that require joining, (a) top and (c) shelf which were evident in the ‘remarks/timber’ column on the right-hand side of the table. This also specified the boards of certain sizes. Some

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students incorrectly tried to make a case for leg and rail assembly, but these consist of more than one component. Other students used a drawer for their answer, which is also incorrect because a drawer consists of four or more components.

Question 2b.

Marks	0	1	2	3	Average
%	90	2	0	8	0.3

Top: $3 \times 0.930 = 2.79$

Shelf: $3 \times 0.870 = 2.61$

$5.40 \times \$7.85 = \42.40

Total lineal metres = top 2.79 m + shelf 2.61 m = 5.4 m

Overall cost of components = \$42.40 (\$42.39 was rounded to \$42.40)

For future work purposes, it is important for students to know how to do basic calculations.

Question 2c.

Marks	0	1	2	3	4	5	6	Average
%	40	4	23	10	15	3	6	1.8

The power tool used is a **jigsaw** and it is used **to remove waste material/cut the shape from the component.**

The hand tool used first is a **hand/jack/try plane** ('a planer' was not accepted as this refers to a portable power plane) and it is used **to smooth out sawn edges created by the jigsaw.**

The hand tool used next is a **cork block** and it is used **with abrasive paper to smooth/sandpaper the components ready for finishing.**

Question 2d.

Marks	0	1	2	Average
%	60	16	24	0.6

- drilled, countersunk, screwed from the underside at the back of the top
- could be screwed (this scored one mark)
- use small brads with heads nipped off to locate dowel positions, to remove brads and drill dowel holes, dowel glue and clamp

Question 3

Marks	0	1	2	3	4	5	Average
%	31	16	27	11	10	6	1.7

drawers	carcase
<ul style="list-style-type: none"> • apply glue • biscuit join the drawer back to drawer sides • glue insert dowels to back drawer fronts • glue corresponding drawer side dowel holes • glue insert drawer front to the drawer sides • apply clamps to keep sides of drawer in place • slide drawer bottom into grooves to help square the drawer 	<ul style="list-style-type: none"> • dowel legs to end rail and square up – do for both ends • dowel back rail, front drawer, rails and shelf • clamp assembly together • square up carcase • remove and clean up excess glue

Students found Question 3 challenging. To obtain five marks, students needed to provide five steps in a logical order.