



Victorian Certificate of Education 2003

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Letter

Figures

Words

VCE VET FURNISHING (CABINET MAKING)

Written examination

Friday 31 October 2003

Reading time: 3.00 pm to 3.15 pm (15 minutes)

Writing time: 3.15 pm to 4.45 pm (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	10	10	50
C	6	6	30
			Total 100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 17 pages with a detachable insert for Section B – Questions 6 and 7 and Section C.
- Answer sheet for multiple-choice questions.

Instructions

- Detach the insert from the centre of this book during reading time.
- 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 electronic communication 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

Concealed hinges, dowels and cams, drawer runners and bolt connectors, are **all** used in

- A. drawer and door construction.
- B. modular construction.
- C. custom-built furniture.
- D. all forms of furniture.

Question 2

Which joint is **not** suited for use in modular construction?

- A. biscuit joint
- B. butt dowel joint
- C. through mortise and tenon joint
- D. joints incorporating knockdown fittings

Question 3

Particle board, with a surface finish, is ideal for use in modular construction because

- A. it has good edge holding strength for screws, nails and staples.
- B. it can be edge moulded and is extremely stable in most furniture applications.
- C. it can be used for all situations in modular furniture without edges needing to be treated.
- D. it is very stable and little distortion or warping occurs when subject to temperature and humidity changes.

Question 4

Drawer stops are traditionally fixed to

- A. the inside of the carcass back.
- B. the inside of the cabinet ends.
- C. drawer runners or guides.
- D. the top face of the foreedge or blade rail.

Question 5

A 'planted' moulding is attached to the

- A. outside edges of a frame for effect.
- B. front surface of a door to form a decorative border.
- C. rebated corner of a frame and raised above the surface.
- D. inside corner of a rebated frame to hold a panel in place.

Question 6

Where are rails used in the construction of a door frame?

- A. in the horizontal parts of the frame
- B. in the vertical members of the frame
- C. in the centre of the frame
- D. at the bottom of the panel

Question 7

Which is the **best** description of a traditionally made drawer?

- A. dovetail drawer machined to uniform size
- B. solid timber drawer held together with nails
- C. drawer built with rebate and stopped housing joints
- D. solid timber drawer held together by handmade dovetails

Question 8

You are making a fine mahogany cabinet with high-quality dovetails.

Which drawer runner should be used for this type of cabinet?

- A. fixed timber runners to grooved drawer
- B. fixed timber runners to carcass
- C. fixed mechanical drawer slides
- D. telescopic extension slides

Question 9

The **most important** reason for using drawer slips when constructing a drawer is to

- A. provide a neat appearance to the inside of the drawer.
- B. reduce cupping on the drawer sides where backsawn timber is used.
- C. strengthen the joints of the drawer construction overall.
- D. increase the strength and reduce wear on the drawer sides.

Question 10

When setting out angles for drawer dovetails, the most suitable angle is

- A. one in two.
- B. one in four.
- C. one in six.
- D. one in eight.

Question 11

When fitting drawers to an opening they should run smoothly without binding.

The gap for a fitted drawer should be

- A. 0.5–1 mm
- B. 1–2 mm
- C. 2–3 mm
- D. 3–4 mm

Question 12

Modular furniture is manufactured for use both in the home and commercially.

Which **one** of the following is best suited to **modular** construction?

- A. contemporary bedroom suite
- B. flat packed kitchen units
- C. dining-room suite
- D. built-in wardrobes

Question 13

One advantage modular furniture has over freestanding well-constructed furniture is

- A. it provides flexibility to work and experiment with an unlimited variety of materials.
- B. it has unique proportions and varying sizes.
- C. it is sold fully assembled and ready for use.
- D. it can be assembled and then easily disassembled with few tools required.

Question 14

A framed door has been assembled in wind (twist).

What is **most** likely to occur when this door is fitted to a cabinet?

- A. The door will leave gaps at the top and bottom of the cabinet opening.
- B. The moulding will not be able to be fitted to hold in the panel.
- C. The door will not sit flat against the front of the cabinet.
- D. The door will twist the cabinet out of square.

Question 15

When clamping a door frame, which is the **most** effective method for ensuring the door is square?

- A. measuring diagonally with a rule
- B. using winding sticks
- C. measuring the perimeter
- D. using a try square

Question 16

Quadrant face marks on the sides of drawers show the

- A. position of the dovetails.
- B. grain direction from front to back.
- C. edges to be planed to fit the opening.
- D. front, bottom left-hand and right-hand sides.

Question 17

A door frame that has a 'fielded panel' is made

- A. full size, then planed down to fit the cabinet.
- B. full size less the thickness of the edge strip.
- C. oversize to allow for mistakes.
- D. undersize to allow for gaps.

Question 18

In a frame the 'bolection moulding' is

- A. stuck moulding applied to the front of the frame.
- B. vertical moulding between two rails grooved for ply.
- C. rebated moulding that sits below the face of the frame.
- D. rebated moulding that projects above the face of the frame.

Question 19

Quality control is used in the production of manufactured goods, including furniture.

Which one of the following is the **best** description of quality control?

- A. a system of managing the outputs of your processes, including both goods and services
- B. a process that ensures the highest quality products are produced
- C. checking products after manufacture and discarding those that are not repairable
- D. the process of checking the product as it goes through production

Question 20

The **best** way to improve quality performance in relation to external customers' needs is

- A. surveying a sample of customers to find out if they are satisfied with your service.
- B. keeping existing customers, because they provide repeat business, rather than win over new customers.
- C. continuously improving processes, products and services to help customers with their quality requirements.
- D. focusing solely on improving the design of your product so that your customers will recommend it to others.

SECTION B – Short-answer questions

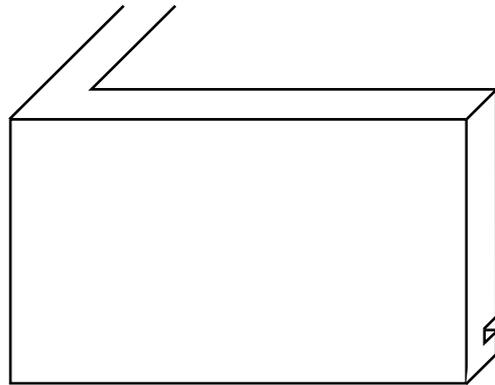
Instructions for Section B

Answer **all** questions in the spaces provided. Refer to the detachable insert when answering Questions 6 and 7. Use explanatory diagrams, charts and sketches if you believe they will improve your answer.

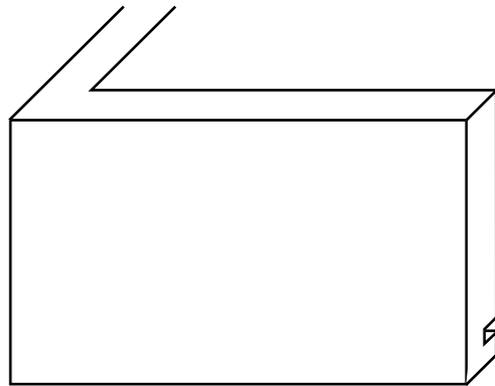
Question 1

Name and draw **three** types of joints used when assembling drawer sides to drawer fronts.

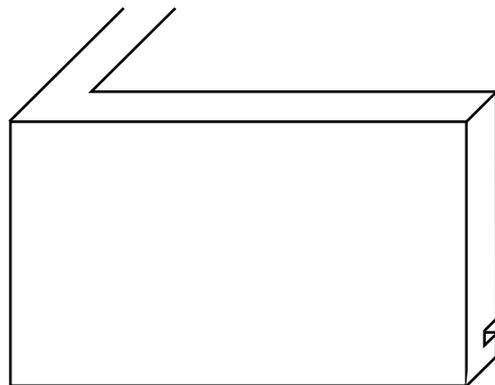
1. _____



2. _____



3. _____

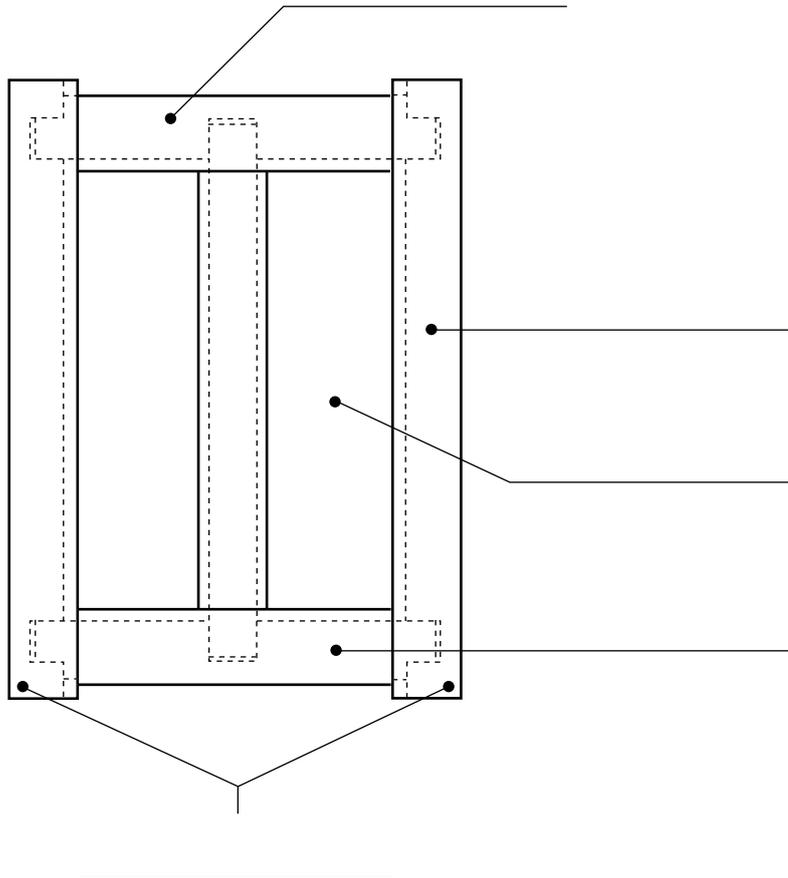


6 marks

Question 2

- a. i. Label the parts of the door frame in the figure below, selecting the correct terms from the following list.

- | | | |
|--------------|----------|---------------|
| top rail | moulding | stile |
| bottom rail | horns | hanging stile |
| locking rail | panel | locking stile |
| slip | | ply |



- ii. Name one joint used in the construction of this door frame.

5 + 1 = 6 marks

- b. What is the name given to the vertical member of a frame separating two panels between two rails?

1 mark

Question 3

Drawer fronts have changed considerably to suit modern applications.

Describe **three** drawer front styles commonly used in modern furniture.

1. _____

2. _____

3. _____

3 marks

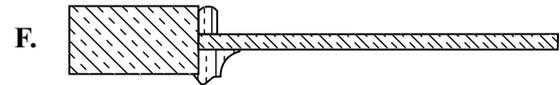
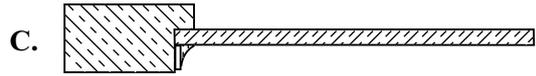
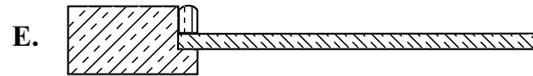
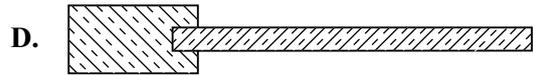
Question 4

A cabinet is constructed and faced with veneer on doors and drawers. Name another decorative treatment that could be used in conjunction with the veneer treatment.

1 mark

Question 5

a. Which of the following (A.–F.) is the fielded panel?



1 mark

b. Describe a specific feature of a fielded panel.

1 mark

c. Provide one example of where this type of panel is commonly used.

1 mark

Refer to Figures A and B in the insert to answer Questions 6 and 7.

Question 6

Complete the cutting list below for the drawer material required for a traditional chest of drawers (Figures A and B in the insert).

The materials used will be

- 20 mm thick mahogany drawer fronts, foredge rails and division piece
- 12 mm thick silky oak drawer sides/back (drawer back material is 20 mm less in width than the drawer side material)
- 4 mm thick silky oak plywood drawer bottoms

Cutting list (Drawers only)

Item/No	Part	No of Pieces	Length	Width	Thickness	Material	Remarks
Drawer 1 and 2 (top)	front		390	130	20	Mahogany	Groove for plywood bottom
	side	4	480	130	12	Silky Oak	
	back	2	390	110		Silky Oak	To match drawer material
	bottom	2	350	472	4	Silky Oak Plywood	To match drawer material
	slip	4	468	20	12	Silky Oak	Groove for plywood
Drawer 3	front	1		145	20		Groove for plywood
	side	2	480	145	12	Silky Oak	
	back	1		125	12	Silky Oak	Rounded top back
	bottom	1	760	472	4	Silky Oak Plywood	To match drawer material
	slip	2	468	20	12	Silky Oak	Groove for plywood
Drawer 4	front	1	800	165	20	Mahogany	
	side	2		165	12	Silky Oak	
	back	1	800		12	Silky Oak	Rounded top back
	bottom	1	760	472	4	Silky Oak Plywood	To match drawer material
	slip		468	20	12	Silky Oak	Groove for plywood
Drawer 5	front	1	800		20	Mahogany	Groove for plywood
	side	2	480	195	12	Silky Oak	
	back	1	800		12	Silky Oak	Rounded top back
	bottom	1	760	472	4	Silky Oak Plywood	To match drawer material
	slip	2	468	20	12	Silky Oak	

12 marks

SECTION B – continued

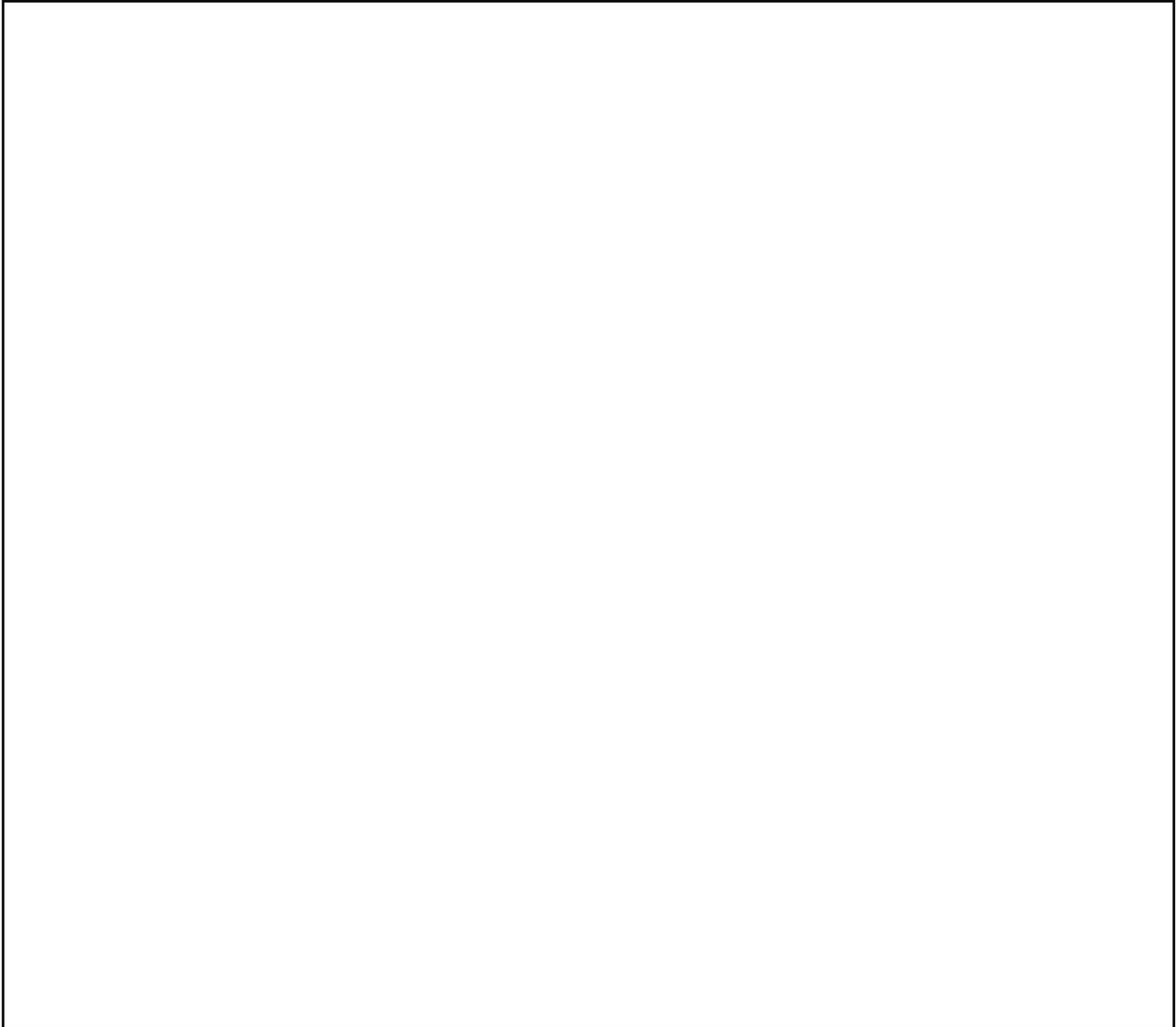
Question 7

Refer to the traditional chest of drawers shown in Figures A and B of the insert.

- a. Design and sketch a matching **bedside table**, with a drawer and a door, in the space below.

4 marks

Use this space to design and label your traditional bedside table.



- b. Label your sketch with four features from the following list: adjustable shelf, back, base, bottom, division, door, drawer front, end, foredge rail, pilaster, plinth rail, rails, stiles and top.

4 marks

- c. List two design details incorporated in your bedside table.

1. _____

2. _____

2 marks

Question 8

Name **two** of the main pre-production steps necessary to produce an item of modular furniture.

1. _____

2. _____

2 marks

Question 9

After assembling a framed panel door, how should you check that the door frame is not in twist or wind?

2 marks

Question 10

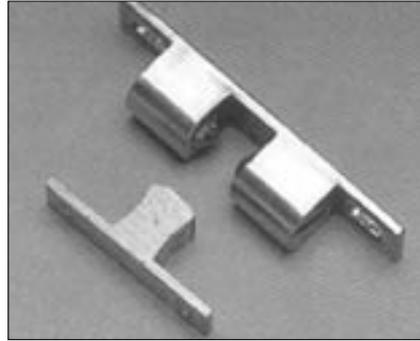
Match the hardware items listed below with the following illustrations (A–F). Enter the corresponding letter (A–F) in the column labelled ‘illustration’.

Hardware item	Illustration
Adjustable shelf support	
Double ball catch	
Straight cupboard lock	
Connector screws	

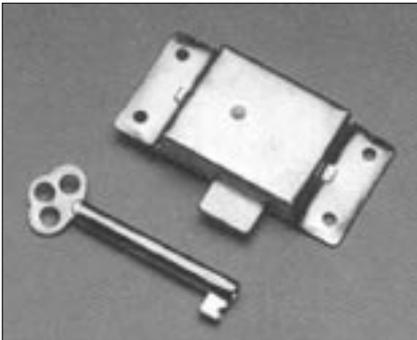
A.



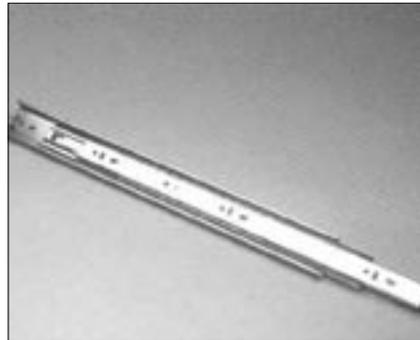
B.



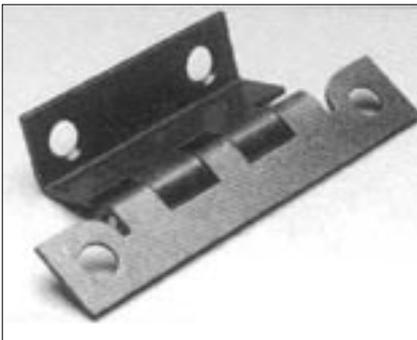
C.



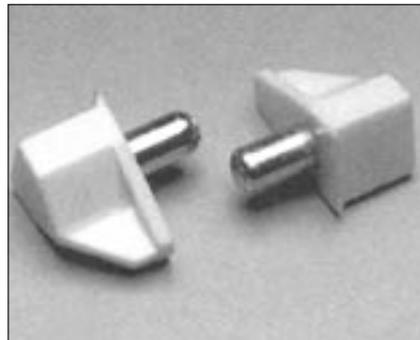
D.



E.



F.



4 marks

Total 50 marks

**END OF SECTION B
TURN OVER**

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

Answer **all** questions in the spaces provided. Refer to the detachable insert when answering this section. Use explanatory diagrams, charts and sketches if you believe they will improve your answer.

A company has been contracted to produce a modular TV/video cabinet with two doors. The cabinet must have two adjustable shelves inside the cabinet, behind the doors, for video player and videotape storage. The top and bottom must overhang 40 mm at the front and 50 mm castor wheels must be attached to the base for easy movability.

No sketches or working drawings have been supplied.

Question 1

In the space below, sketch a freehand drawing of the TV/video cabinet using the given information above and cutting list (Figure C) in the insert. Include overall measurements for the height, width and depth of the cabinet on your sketch.



6 marks

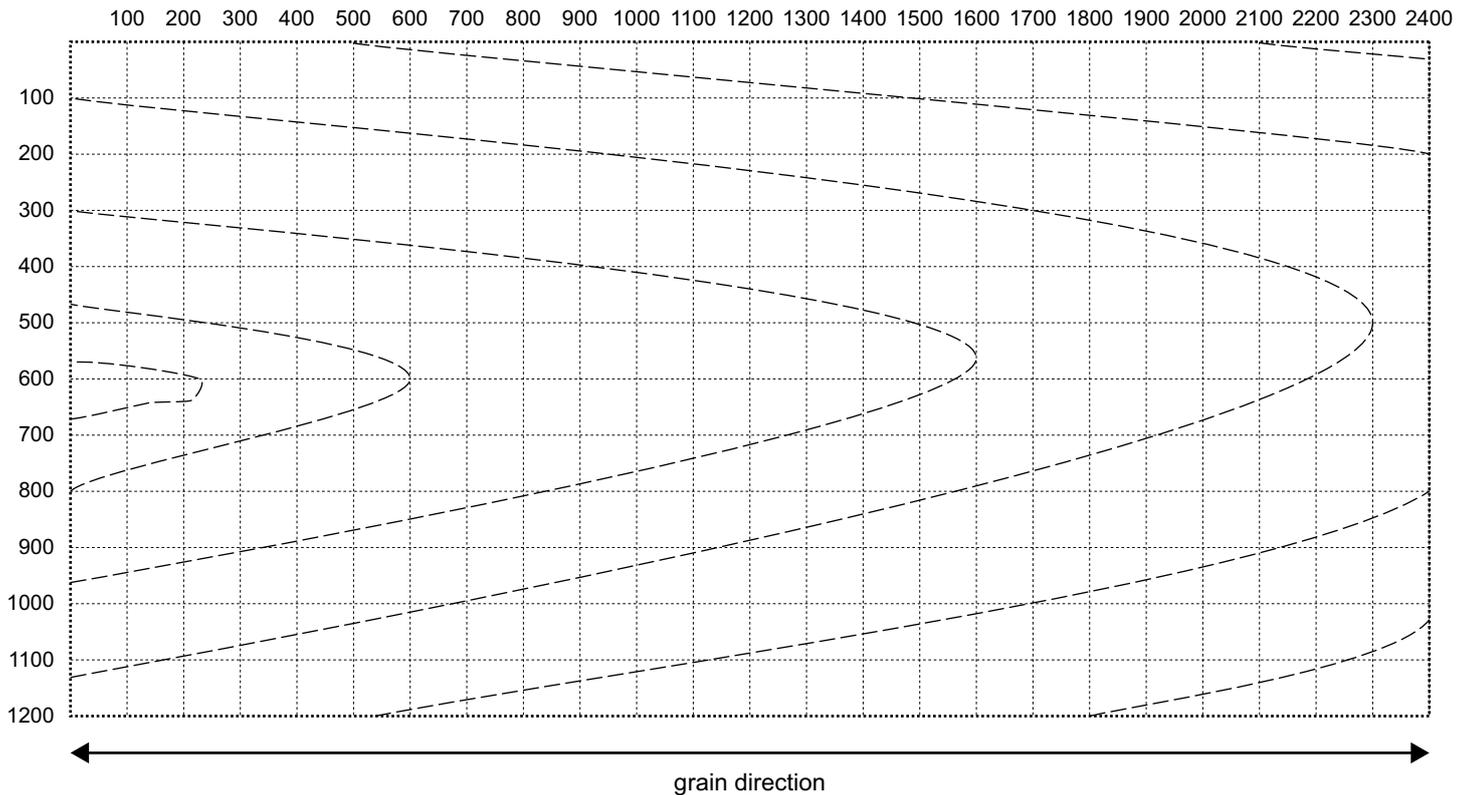
Question 2

Using the grid provided below, draft a sheet cutting plan for all the 19 mm Victorian Ash veneered MDF board required for the modular TV/video cabinet using the cutting list provided.

Your plan should be the most economical cutting plan for a standard 2400 mm × 1200 mm Ash veneered MDF board.

Label each part.

Grid
Standard 2400 mm × 1200 mm sheet



9 marks

Question 3

A variety of cabinet hardware fittings are used in the construction of this modular TV/video unit.

Name two hardware fittings that are suitable for the **construction** of the modular TV/video unit and complete the table below.

Suitable hardware	Where on the unit would this hardware be used?	Why is this hardware the most suitable?
Fitting 1 <hr/>		

1 + 1 + 2 = 4 marks

Fitting 2 <hr/>		
--------------------	--	--

1 + 1 + 2 = 4 marks

Question 4

What would be the **most** suitable hinge to use on this TV/video cabinet?

1 mark

Question 5

Name two other manufactured boards suitable to use in the construction of this TV/video cabinet.

1. _____
2. _____

2 marks

Question 6

Your company receives an order from a retailer for 200 TV/video cabinets, unassembled in flat pack form. Your manager is keen to receive follow-up orders, so quality requirements to meet customer demands have been initiated.

You have been asked to preassemble one in every 10 units, prior to packing, to ensure that components fit.

Complete the company checklist below showing **four** quality requirements that must be met. Tick the relevant box for each item (✓).

Item		Quality requirements		
TV/video cabinet		Adequate packaging provided to prevent damage during transport.	Check shelf and door sizes. All components to match.	Hardware pack, for example, includes knockdown fittings, shelf supports, hinges and handles.
1	Two matching doors included in pack			
2	Two adjustable shelves to each pack			
3	Printed cardboard container provided, sealed with packing tape			
4	50 mm castors in 4 pack with adequate screws			

4 marks

Total 30 marks

Insert for SECTION B – Questions 6 and 7 and SECTION C

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

SECTION B – Questions 6 and 7



Figure A. Traditional chest of drawers

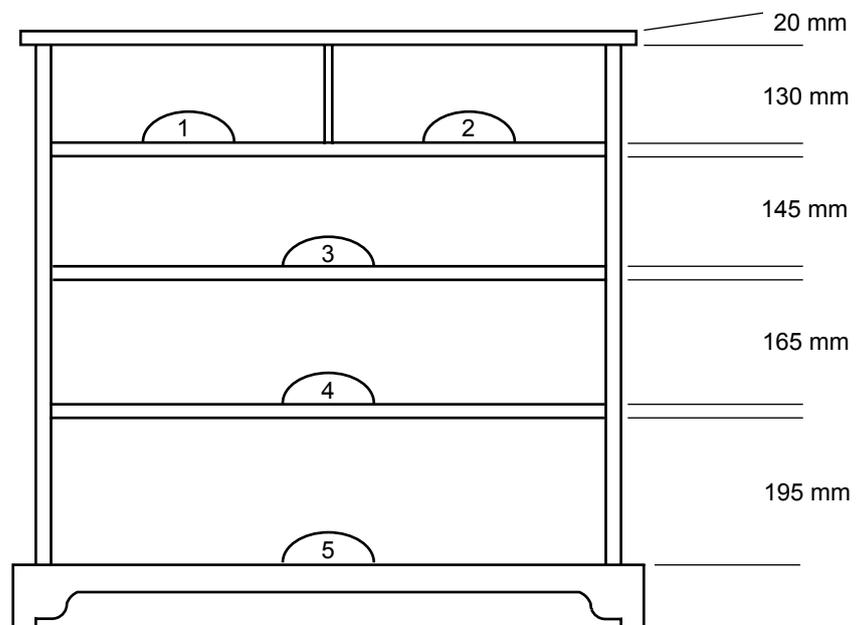


Figure B. Traditional chest of drawers

SECTION C

A company has been contracted to produce a modular TV/video cabinet with two doors. The cabinet must have two adjustable shelves inside the cabinet, behind the doors, for video player and video tape storage. The top and bottom must overhang 40 mm at the front and 50 mm castor wheels must be attached to the base for easy movability.

No sketches or working drawings have been supplied.

Cutting list				Job: TV/video cabinet			
Item No	Description	No pieces	Length	Width	Thickness	Material	Remarks
1	Unit sides	2	600	380	19	Ash veneer MDF	Front edge veneered
2	Top and bottom	2	800	420	19	Ash veneer MDF	Front and two sides veneered
3	Doors	2	595	395	19	Ash veneer MDF	All edges veneered
4	Adjustable shelf	2	760	380	19	Ash veneer MDF	Front edge veneered
5	Ply back	1	785	630	4	Ash ply	

Figure C. Cutting list