



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate 2024

Marking Scheme

Construction Studies

Ordinary Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

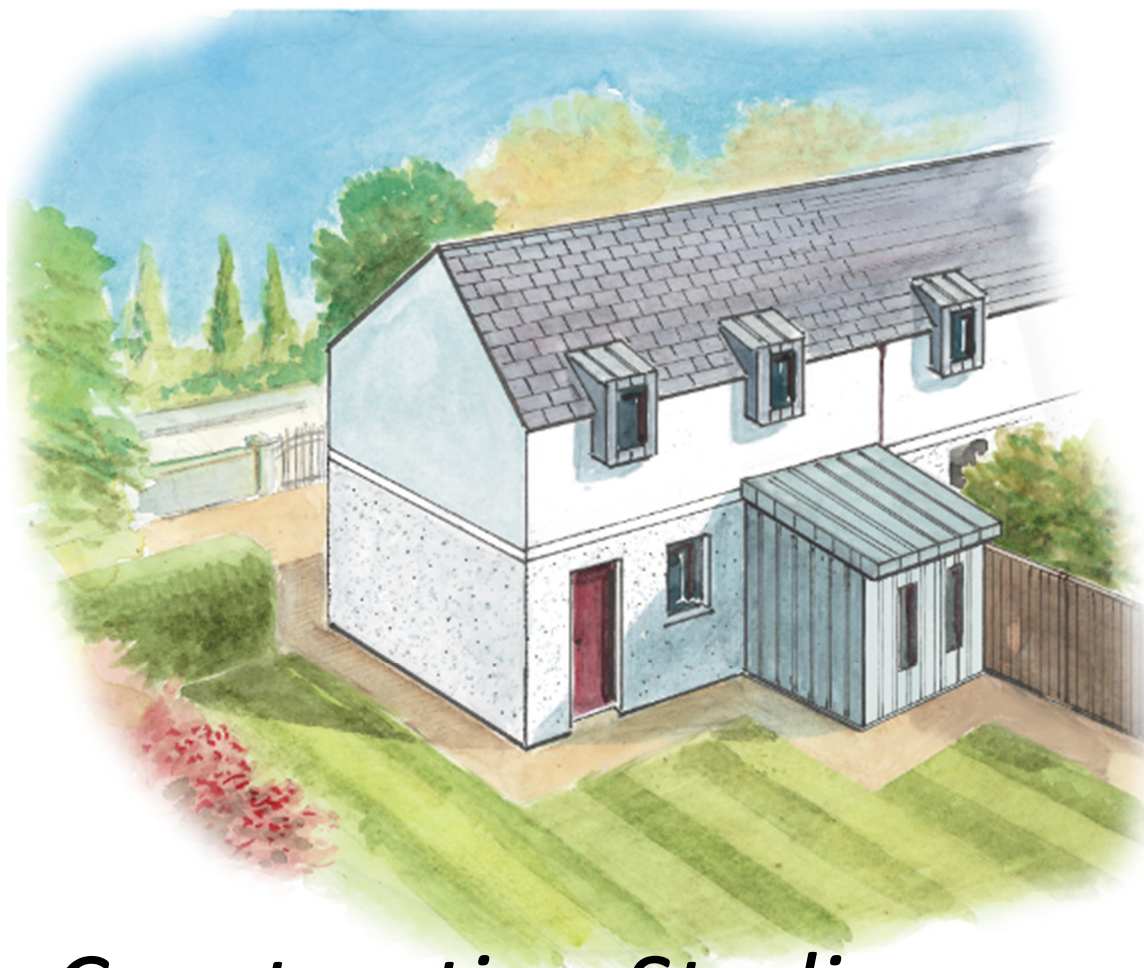
Future Marking Schemes

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.



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Leaving Certificate Examination 2024



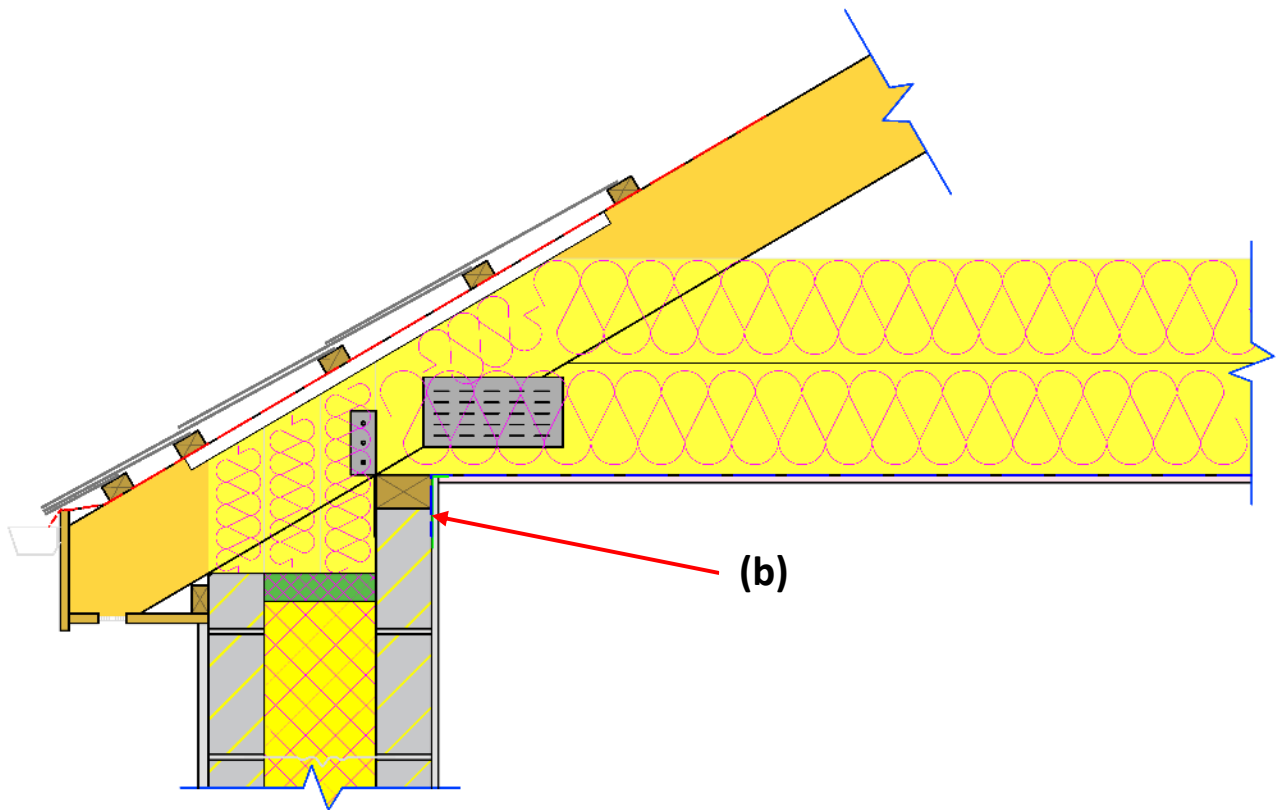
Construction Studies

Theory – Ordinary Level

Note: Notes and graphics are for illustration and are not exclusive or exhaustive, other relevant notes and graphics are acceptable as responses and will be credited accordingly.

Question 1.

(a) Vertical section through the eaves of a roof constructed using prefabricated trussed rafters.



Specification – typical detail

- | | |
|--|-------------------------------|
| • 19 mm external render | • Airtight membrane/tape |
| • Concrete block outer leaf 100 mm | • Plasterboard with skim coat |
| • Full fill insulated cavity 200 mm | • Ventilation |
| • Wall tie | • Soffit |
| • Concrete block inner leaf 100 mm | • Fascia |
| • 15 mm internal plaster | • Tilting fillet |
| • Cavity closer | • Breather membrane |
| • 100 mm x 75 mm wall plate | • Battens 50 mm x 30 mm |
| • Prefabricated roof truss 200 mm x 50mm | • Slates |

N.B. Any alternative detailing which complies with current Building Regulations is acceptable.

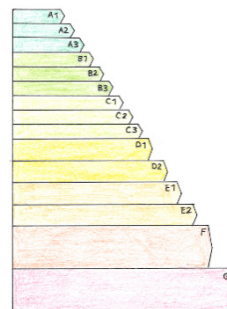
(b) Design detailing to secure the wallplate to the external wall.

Wall plate strap.

Question 2

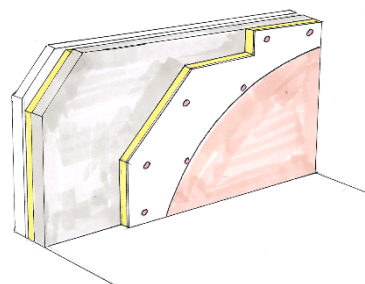
(a) Two advantages of improving the Building Energy Rating (BER) of a home.

- Reduced energy bills
- Reduces heat loss
- Increased comfort levels
- The value of the home will increase
- Better for the environment



(b) One suitable method of applying insulation to the internal surface of the wall

- Ensure the wall is clean and free from wallpaper or gloss paint before starting
- Cut insulated plasterboard sheets to size as required
- Fix the insulated plasterboard to the wall with mechanical fixings. Adhesive dabs may also be used to secure
- Insulating materials – phenolic foam, wood fibre, sheep's wool, EPS insulation
- Plasterboard skim coated with plaster or taped and filled to provide a finish

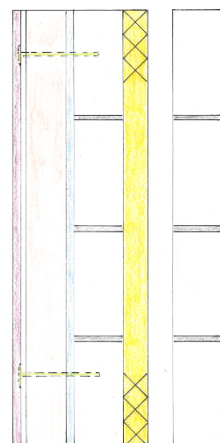
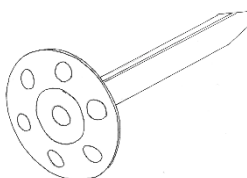


Alternative method

- Securely fix timber battens to the walls
- Fill the space between the battens with insulation
- Fix the plasterboard sheet to the battens and skim over

Type of insulation

- Expanded polystyrene EPS
- Phenolic
- Polyisocyanurate (PIR)
- Extruded Polystyrene (XPS)

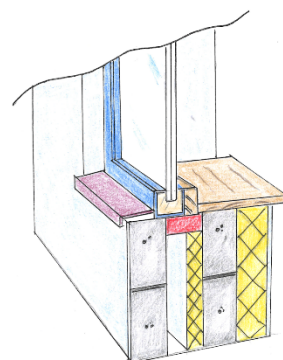


Thickness of insulation

- 50 mm insulation thickness minimum

(c) Two reasons why external wall and window upgrades should be carried out at the same time.

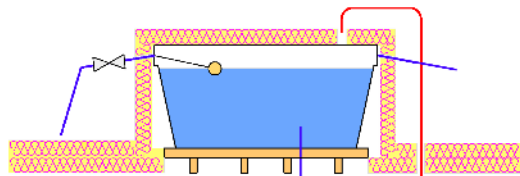
- To ensure a more complete finish with better airtightness achieved
- More cost effective to carry out multiple energy upgrades at the same time
- To increase comfort levels in the house
- To reduce further the energy usage of the home and in turn reduce carbon emissions
- Reduced disruption to the homeowner by having both done at the same time
- Additional grants available for multiple energy upgrades



Any other suitable reason will be accepted

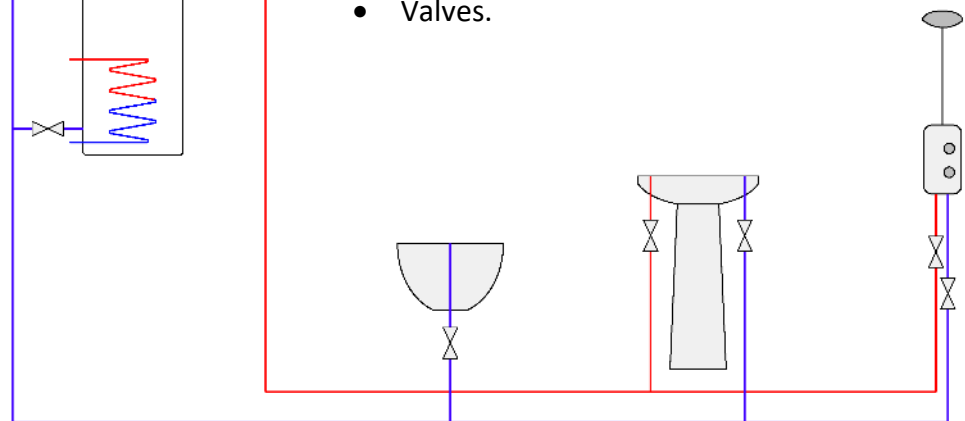
Question 3

- (a) Pipework required to provide hot and cold water to a mixer-shower and wash basin, and to provide cold water to a toilet cistern.



Typical details:

- 15 mm rising main
- Insulated storage tank
- 250 l cylinder
- Ø22 mm cold feed to cylinder
- Ø28 mm expansion pipe
- Toilet cistern
- Ø15 mm cold feed to toilet cistern
- Wash basin
- Ø15 mm hot and cold feed to wash basin
- Mixer-shower
- Ø15 mm hot and cold feed to mixer shower
- Valves.

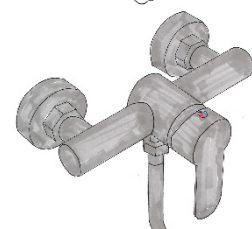
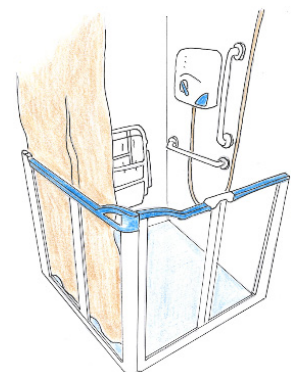


N.B. Any alternative detailing which complies with current Building Regulations is acceptable.

- (b) Two features that should be included to ensure a shower area is suitable for a person with limited mobility.

- Safe and comfortable access is essential
- Large shower area for mobility
- Shower curtain or screen instead of shower doors
- A non-slip shower area without a step
- The addition of a wall mounted foldable seat may be included
- Shower controls within easy reach. Lever taps preferable
- Contemporary grab rails

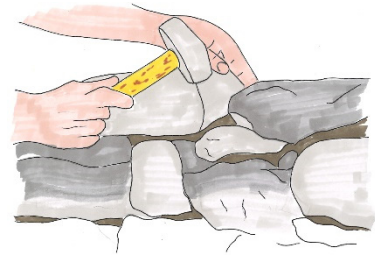
Any other suitable reason will be accepted



Question 4

(a) Two advantages of choosing a natural stone finish for an entrance wall.

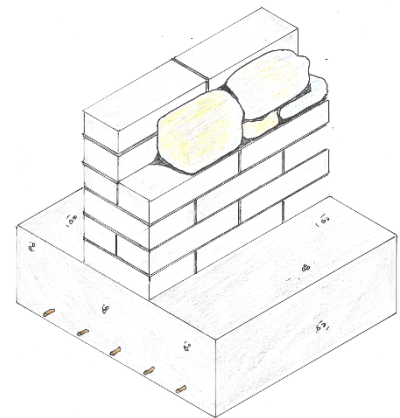
- It is an attractive finish
- Helps the wall blend in with the natural landscape
- Durable hardwearing material
- Natural stone is very low maintenance
- Can be sourced locally giving it a low embodied energy
- Stone masonry is an important heritage craft skill that we must retain



Any other valid reason will be accepted.

(b) Typical design for a strip foundation.

- Strip foundation is the most common and suitable foundation for a boundary wall
- Strip foundation is usually 3 times wider than the width of the wall
- The weight of the wall is distributed to the foundation at 45°
- Steel reinforcement is placed at the bottom of the foundation to add tensile strength. Minimum 50 mm concrete cover
- The wall is built on the centre of the foundation
- A 1350 mm x 450 mm foundation is suitable for a 450 mm wall



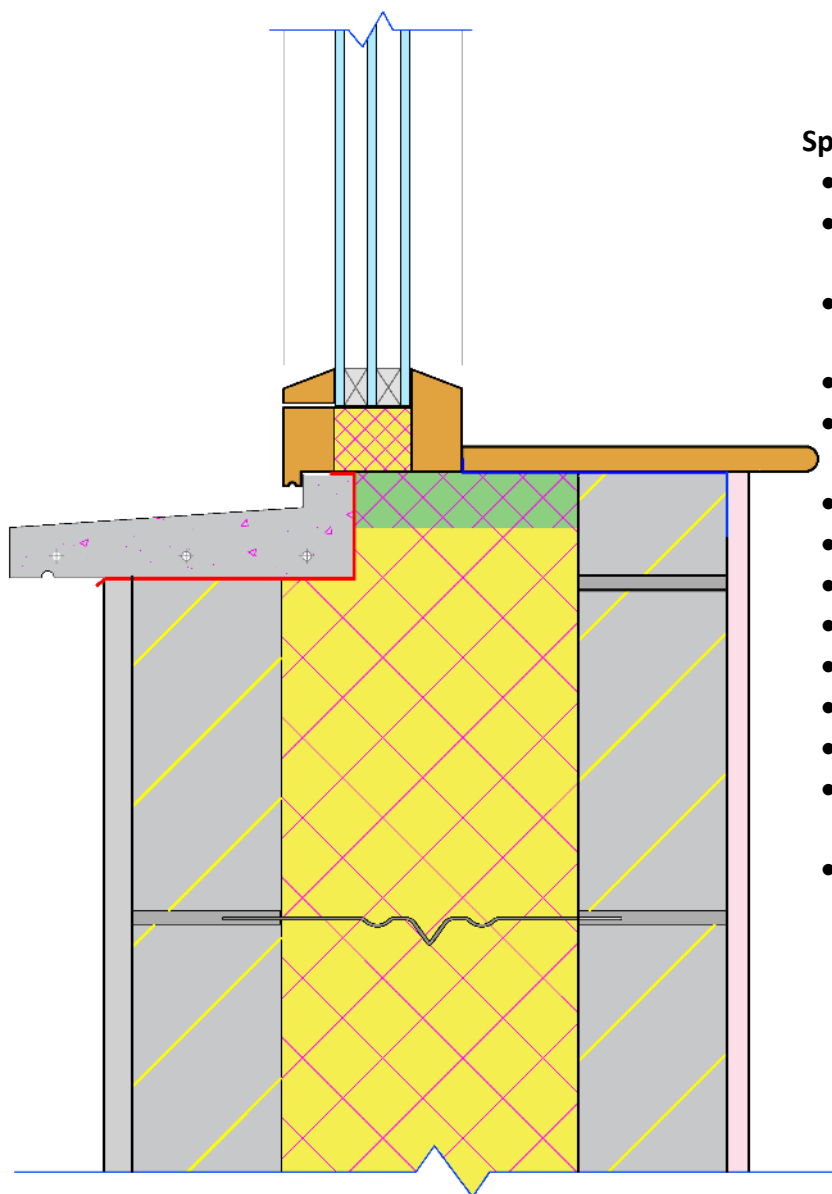
(c) Specify a suitable surface finish for the driveway, give two reasons for your choice.

Driveway finish	Reason
Tarmac	Aesthetically pleasing Durable Low maintenance Long lasting
Concrete	Long life span Low maintenance Made from earth minerals so can be reused or recycled Easy to source
Gravel/ornamental stone	Aesthetically pleasing Cheaper option Can blend in with rural landscape More choice of colour finishes
Block paving	Modern appearance Easy to repair if damaged Can blend in with rural landscape More choice of colour finishes
Resin	Modern appearance Low maintenance Long Lasting

Any other suitable detail will be accepted.

Question 5

(a) Vertical section through the external wall and window.



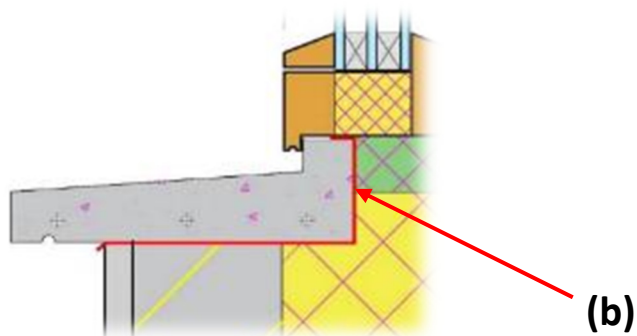
Specification – typical detail

- 19 mm external render
- Concrete block outer leaf 100 mm
- Full fill insulated cavity 200 mm
- Wall tie
- Concrete block inner leaf 100 mm
- 15 mm internal plaster
- Cavity closer
- DPC
- Precast concrete cill
- Throating / drip
- Window board
- Airtightness tape
- Window frame 120 mm x 80 mm
- Triple glazing

Note: Any alternative detailing which complies with current Building Regulations is acceptable

(b) Preventing moisture penetration at the window cill.

DPC and drip.



Any other suitable detail will be accepted.

Question 6

(a) Two safety precautions that the driver must observe when operating a site dumper.

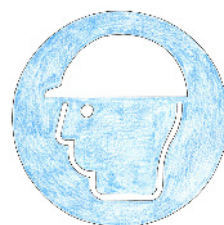
- Ensure operators wear suitable personal protective equipment (PPE) such as hard hat, steel toe boots and hi-visibility clothing
 - Inspect vehicle before use to ensure it is in proper working order
 - Always wear your seatbelt
 - Check work area for obstacles, holes or overhead powerlines
 - Cordon off area where moving vehicle is being operated
 - Ensure operator has carried out the proper training in the use of a site dumper
 - Never jump on or off the dumper – three points of contact rule
 - Be vigilant at all times of your surroundings and others around you
- Any other suitable specific precaution will be accepted.*



(b) Three items of personal protective equipment (PPE) which should be worn by workers when working with construction vehicles. Give one reason for each.

Hard hat

Protects the construction workers head from impacts or should material fall from a height.



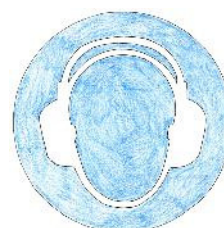
High-visibility vest

Allows construction workers to be clearly visible when working on site. Operators of construction vehicles will see other workers and avoid accidents.



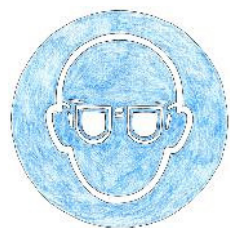
Ear defenders

Protect the hearing of construction workers from the noisy environment while they operate machinery.



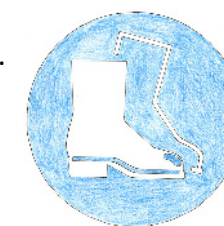
Safety glasses

Protect the construction workers eyes from any flying debris.



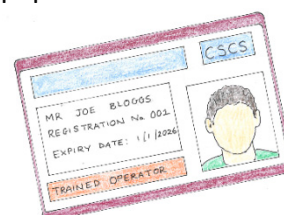
Safety boots

Protects workers from heavy materials or objects being dropped and injuring their foot.



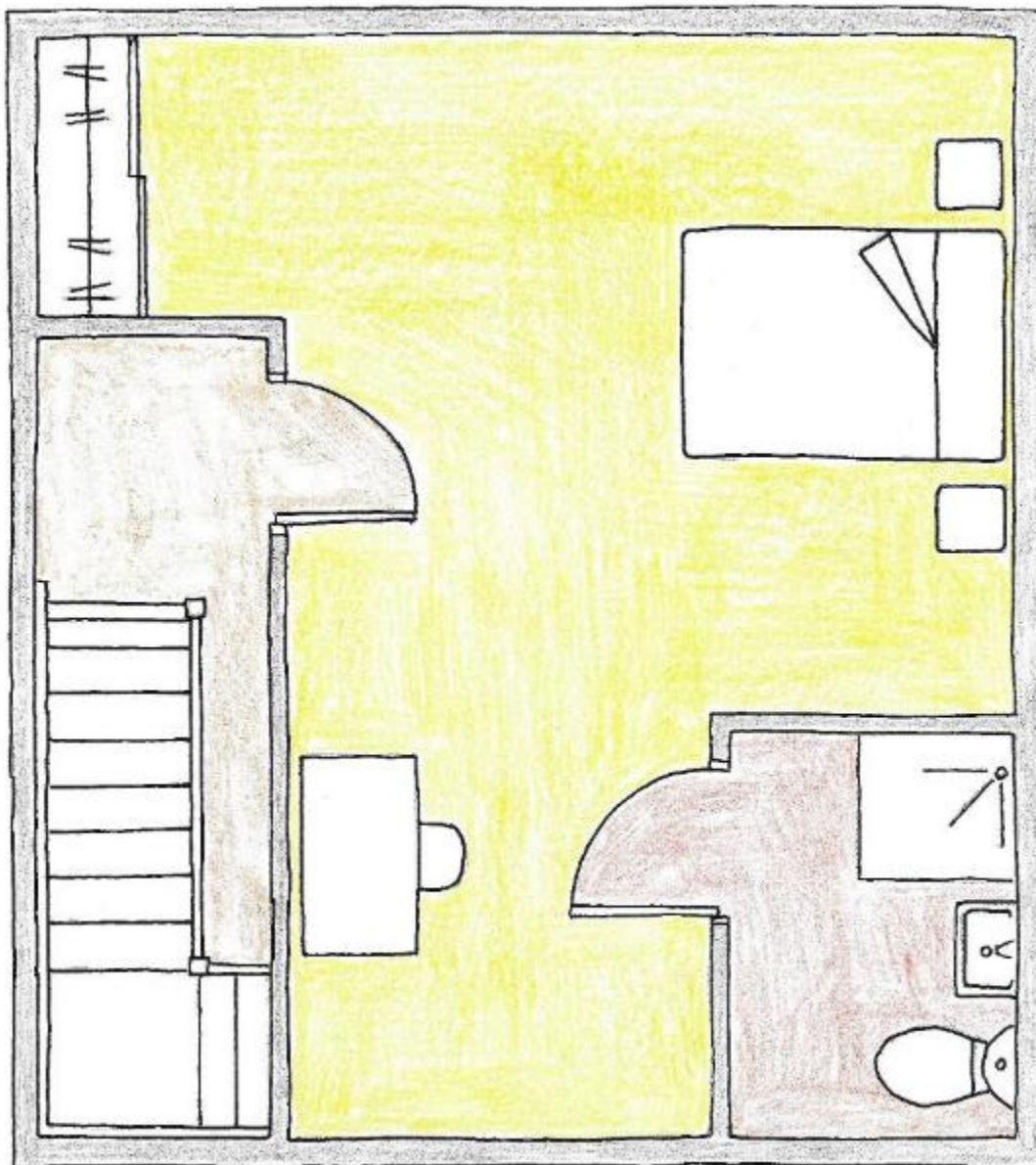
(c) Two reasons why vehicle operators must undertake a specific training course prior to operating a vehicle on a construction site.

- Regulations require construction operators hold specific certifications or licenses
- Proper training ensures operators understand safety protocols, reducing accidents
- To provide the necessary knowledge to effectively operate the equipment
- Operators can identify risks and take appropriate measures to mitigate them, preventing accidents
- Well-trained operators are more efficient and productive
- Training courses teach proper maintenance, extending the lifespan of construction vehicles.



Question 7

- (a) **Discuss two advantages of converting an attic space into a bedroom.**
- It's a cost-effective way of adding additional living space to the home
 - Creates an extra bedroom for the homeowner
 - Increases the value of the home
 - Adds versatility to the home as the bedroom could have additional uses
 - Saves the need for extending the home to create an extra bedroom
 - May provide better sound proofing as away from living space
 - Conversion provides the opportunity to insulate the roof to a higher standard
- (b) **Draw a large freehand sketch of the given design and show your preferred location for each of the following in the room:**
- access to en-suite • double bed • clothes storage unit • study space.



Give one reason for selecting each location.**access to en-suite**

- Located by shower to allow user more room inside the en suite
- Located by shower providing more wall space in the bedroom for storage etc
- Located opposite the sink providing more privacy away from the bed

double bed

- Located against wall with room for bedside tables
- Access to electrical sockets and light switch
- Located away from eaves for head height

clothes storage unit

- Located by wall to allow adequate space for the bed and to circulate
- Located by wall so the units can be supported and attached for strength and stability
- Located in alcove to make use of underutilised space

study area.

- Located away from the bed to create a different zone within the bedroom
- Located away from the corner to ensure adequate lighting
- Located in alcove to make use of underutilised space

Or any other suitable locations and reason will be accepted

(c) Specify a suitable floor covering for the bedroom and give two reasons for your choice.

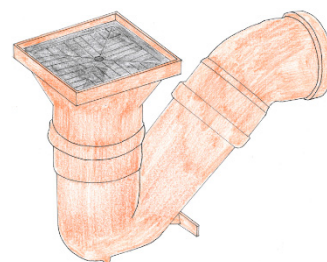
Carpet	Comfortable material to walk on Carpet absorbs sound, reducing noise transfer Available in a variety of colours and patterns
Wood laminate	Durable material and can withstand daily use Less expensive solution compared to other flooring types Less maintenance compared to solid flooring
Vinyl	Easy to install Large variety of designs and appearances Water resistant material
Solid wood	Durable material and can withstand daily use Attractive option particularly if hardwood chosen Can be sanded and refinished if required
Linoleum	Hardwearing material Waterproof floor covering Available in a range of textures and colours

Any other valid floor covering and reason will be accepted.

Question 8

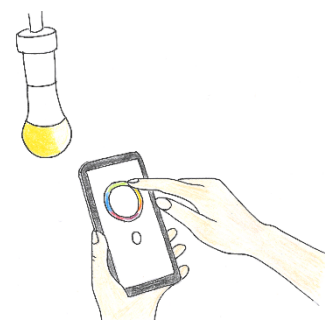
Gulley trap

- A gulley trap is a plumbing fixture used in sewage and rain water systems to prevent foul odours from entering a building
- Typically, a U-shaped pipe installed underground
- The trap works by trapping water in the U-bend, which forms a barrier between the sewer gases and the building
- This water barrier prevents foul odours and harmful gases such as methane from entering the building through the sewerage system
- Gully traps require regular maintenance to ensure they remain effective in preventing odours and gases from entering buildings.



Smart lighting

- Smart lighting systems allow users to control various aspects of their lighting remotely and often automatically
- Smart lighting typically uses internet connectivity to be controlled through smartphones, tablets, or voice commands
- Smart lighting systems often include scheduling and automation features. Users can set timers or schedules for their lights to turn on, off, or adjust brightness levels automatically
- By allowing users to easily control and automate their lighting, smart lighting systems can contribute to energy savings
- Users can often customise the colour, brightness, and ambiance of their smart lights to suit their preferences.



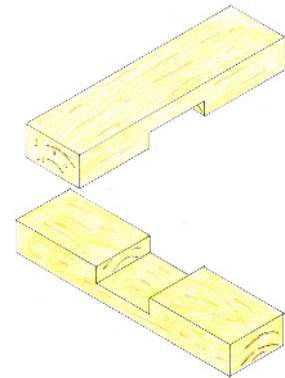
Site planning notice

- A site planning notice is a public notice an applicant must erect at the site of development, when applying for planning permission
- It must be clearly visible and legible to the public from the road
- The notice must contain certain details including the name of the applicant, site address, details on the type of application and nature of the development
- This notice is required under planning regulations and serves to inform the public about the development plans and provide an opportunity for interested parties to submit observations or objections
- The site notice is required to be in place for the first five weeks after the lodgement of the planning application
- Failure to comply with the regulations of the site notice may make the application invalid.



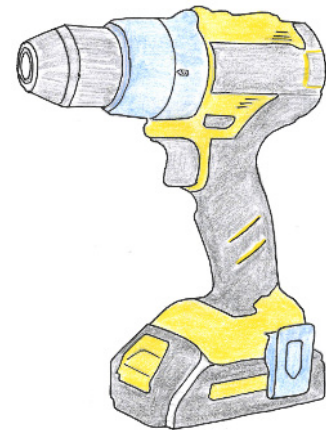
Halving joint

- A halving joint is common strong woodworking joint with a medium gluing area
- The joint can be a cross halving, corner halving, T-halving or dovetail halving joint
- Halving joints involve half of the material removed from each piece at the joint area
- Halving joints are commonly used for framing construction and in furniture making
- The corner halving joint can be used in frame construction
- The dovetail halving joint is a strong and attractive way of using a halving joint.



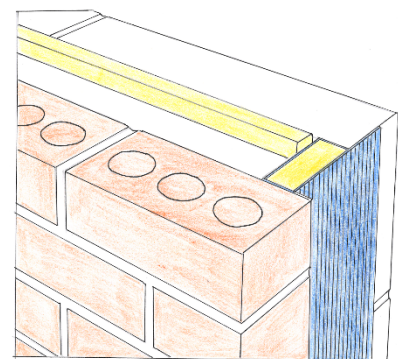
Cordless drill

- A cordless drill is a portable power tool used for drilling holes and driving screws
- Cordless drills are powered by rechargeable batteries
- Cordless drills are more convenient and versatile than corded electric drills
- They are typically powered with lithium-ion batteries
- As they are battery powered, they allow users to work in areas which have no access to a power source
- Modern cordless drills contain additional features such as an LED light and a battery power indicator.



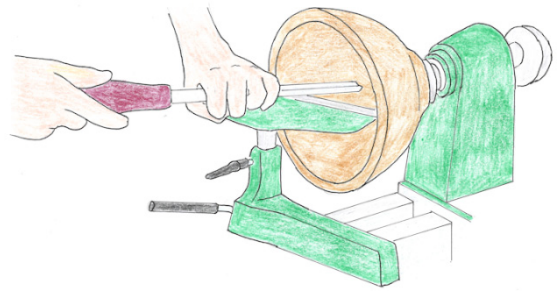
Cavity closer

- A cavity closer is used at wallplate level and around window and door openings to fill the gap between the inner and outer leaves of a cavity wall
- The cavity closer helps to prevent thermal bridging between the inner and outer leaf
- They also help prevent damp penetration, air infiltration and condensation
- Cavity closers help to improve the thermal performance of the building envelope and contribute to energy efficiency
- Cavity closers are typically made from materials such as insulation foam or rigid insulation boards
- They typically come in widths of 100-150 mm to suit the cavity width.



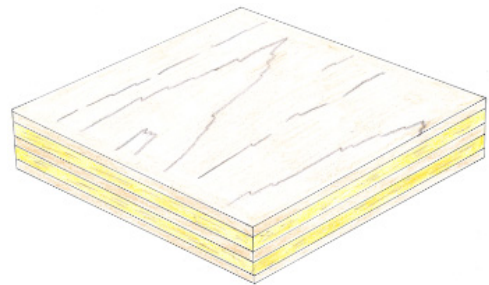
Faceplate turning

- Faceplate turning is a woodturning method often used to create large flat circular items
- It involves mounting a work piece onto a faceplate and attaching to the headstock of a woodturning lathe
- Faceplate turning allows you create items such as wooden bowls, plates and other shallow items
- As the work piece turns, the tool rest is used to support the lathe chisel which removes material from the wood
- When faceplate turning the speed of the lathe should start slow until the piece is balanced and the speed is then increased
- Faceplate turning is a skilled process and can product beautiful decorative items.



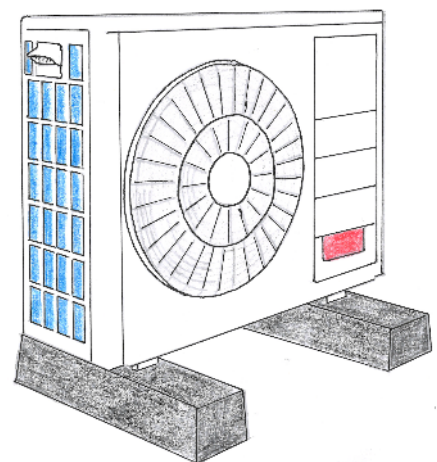
Plywood

- Plywood is a type of engineered wood panel made by gluing together thin layers of wood veneers
- These veneers are usually arranged with their grain direction perpendicular to each other, to enhance its strength
- Plywood is widely used in construction, furniture making and cabinet-making
- Plywood provides a strong and relatively low-cost alternative to solid wood
- Plywood comes in various thicknesses and sizes to suit different applications
- Marine plywood is a type of plywood designed for use in high-moisture environments such as boat building and exterior construction.



Heat pump

- A heat pump is a device that can transfer heat from one location to another using mechanical means
- It is commonly used for heating or cooling indoor spaces and can be more energy-efficient compared to traditional heating and cooling systems
- Heat pumps work by extracting heat from a heat source such as the air, water, or ground and transferring it into a home
- A heat pump system uses underfloor heating or radiators to transfer heat around the home
- A heat pump uses electricity as its main power source, but they generally have a coefficient of performance ratio (COP) of 3-4
- Grants are available to homeowners to encourage them to change from a fossil fuel heating system to a heat pump.

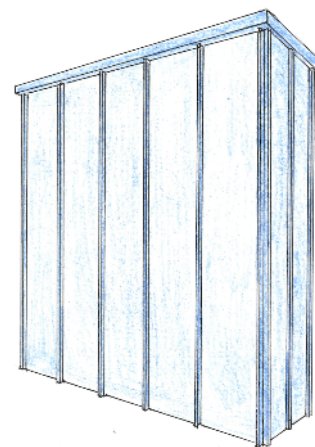


Question 9

(a) Two reasons why zinc is a suitable cladding material for modern homes.

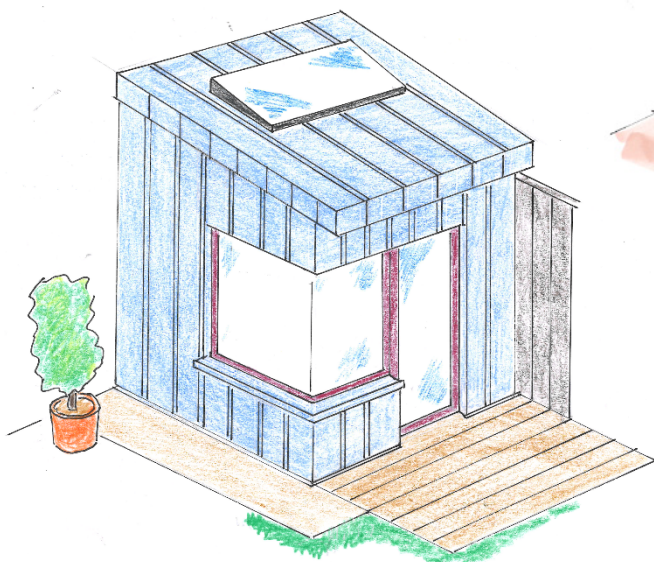
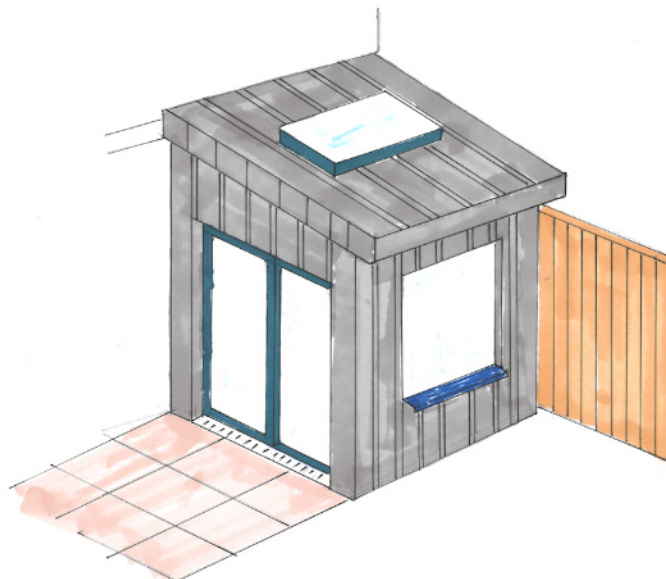
- Modern appearance
- Aesthetically pleasing
- Highly durable and has a long lifespan
- Requires minimal maintenance compared to other materials
- Is a sustainable material with a low environmental impact
- Can be recycled
- It is non-combustible and resistant to corrosion

Any other valid reason



(b) Two modifications to the family room that would allow for additional natural light and access to the rear garden.

- Install roof lights
- Install larger windows at the rear
- Additional windows to side or rear
- Replace windows with a large glazed door
- Install a large bi-fold or sliding door



(c) Two advantages of providing access to the rear garden.

- Increase the occupant's usable space
- Connection with nature that can improve mood and well-being
- Creates outdoor living space
- Encourages the use of the outdoors
- Increases the resale value of the property

Any other valid reason

Question 1.

Vertical section through the eaves and external wall.		
Details - typical sizes		Marks
Part (a)		
Concrete block outer leaf with external render		5
Full fill cavity with wall tie		
Concrete block inner leaf with internal plaster		5
Cavity closer		
Wallplate 100 mm x 75 mm		5
Prefabricated roof truss		5
Insulation and airtight membrane		5
Plasterboard with skim coat		5
Fascia, soffit & gutter		5
Ventilation		5
Breather membrane		
Slates and battens		
Any 7 x 5 marks	Sub-total	35
Any 3 typical dimensions		3
Draughting, accuracy and scale	(excellent, good, fair) 8 6 4	8
	Sub-total	11
Part (b)		
Show how the wallplate is secured to the external wall.		
Wallplate strap clearly identified		4
	Sub-total	4
		50 marks

Question 2.

Energy upgrades			
Details			Marks
Part (a)			
Discuss two advantages of improving the Building Energy Rating (<i>BER</i>) of a home.			
Advantage 1			6
Advantage 2			6
Sub-total			12
Part (b)			
Applying an internal insulation system to a house.			
Method of insulating external walls	note & sketch	(8 + 8 marks)	16
Preferred insulation type for external wall			4
Thickness of insulation			4
Sub-total			24
Part (c)			
Discuss two reasons why external wall and window upgrades should be carried out at the same time.			
Reason 1			7
Reason 2			7
Sub-total			14
Total			50 marks

Question 3.

Bathroom hot and cold supply		
Details – typical sizes		Marks
Part (a) Pipework required to provide hot and cold water to a mixer-shower and wash basin, and to provide cold water to a toilet cistern.		
Rising main		5
Insulated storage tank		
Overflow		
Cylinder		
Cold feed to cylinder		
Expansion pipe		
Bathroom fixtures		
Cold feed to toilet cistern		
Hot and cold feed to wash basin		
Hot and cold feed to mixer shower		
Valves		
Labels		
Any 8 x 5 marks	Sub-total	40
Part (b) Two features that should be included to ensure a shower area is suitable for a person with limited mobility.		
Feature 1		5
Feature 2		5
	Sub-total	10
Total		50 marks

Question 4.

Entrance wall and foundation.			
Details			Marks
Part (a)			
Two advantages of choosing a natural stone finish for an entrance wall .			
Advantage 1			6
Advantage 2			6
Sub-total			12
Part (b)			
Typical design detailing of the strip foundation for this wall.			
Strip foundation	sketch & note	(4 + 2 marks)	6
Steel reinforcement	sketch & note	(4 + 2 marks)	6
Position of wall	sketch & note	(4 + 2 marks)	6
Typical dimensions		(3 + 3 marks)	6
Sub-total			24
Part (c)			
Specify suitable driveway finish and two reasons			
Suitable material			6
Reason 1			4
Reason 2			4
Sub-total			14
Total			50 marks

Question 5.

Vertical section through wall and window.		
Details - typical sizes		Marks
Part (a)		
Draw a vertical section through the external wall and the bottom of the window.		
Concrete block outer leaf with external render		5
Full fill insulated cavity with wall tie		
Concrete block inner leaf with internal plaster		5
Cavity closer		5
Concrete cill		5
Drip/throating		5
DPC		5
Thermal broken window frame		5
Triple glazing		5
Airtightness		5
Window board		
Any 8 x 5 marks	Sub-total	40
Draughting, accuracy, dimensions and scale	(excellent, good, fair) 6 4 2	6
	Sub-total	6
Part (b)		
Show how to prevent moisture penetration at the window cill.		
DPC and drip		4
	Sub-total	4
Total		50 marks

Question 6.

Site Safety		
Details		Marks
Part (a)		
Two safety precautions that the driver must observe when operating a site dumper		
Safety precaution 1		6
Safety precaution 2		6
Sub-total		12
Part (b)		
Show three items of personal protective equipment (<i>PPE</i>) which should be worn by workers when working with construction vehicles.		
Item of PPE 1 and specific reason	(5 + 3 marks)	8
Item of PPE 2 and specific reason	(5 + 3 marks)	8
Item of PPE 3 and specific reason	(5 + 3 marks)	8
Sub-total		24
Part (c)		
Two reasons why vehicle operators must undertake a specific training course prior to operating a vehicle on a construction site.		
Reason 1		7
Reason 2		7
Sub-total		14
Total		50 marks

Question 7.

Bedroom design	
Details	Marks
Part (a)	
Two advantages of converting an attic space into a bedroom.	
Advantage 1	5
Advantage 2	5
Sub-total	10
Part (b)	
Show preferred location and a reason for each of the following; • Access to en suite • double bed • clothes storage unit • study space.	
Sketch	8
Location and valid reason for access to en suite (3 + 2 marks)	5
Location and valid reason for double bed (3 + 2 marks)	5
Location and valid reason for clothes storage unit (3 + 2 marks)	5
Location and valid reason for study space (3 + 2 marks)	5
Sub-total	28
Part (c)	
Suitable floor covering for the bedroom and give two reasons for your choice.	
Suitable floor covering	4
Reason 1	4
Reason 2	4
Sub-total	12
Total	50 marks

Question 8.

Construction Terms	
Details	Marks
Item one	
Primary communication of relevant information	6
Other communication of relevant information	4
Item two	
Primary communication of relevant information	6
Other communication of relevant information	4
Item three	
Primary communication of relevant information	6
Other communication of relevant information	4
Item four	
Primary communication of relevant information	6
Other communication of relevant information	4
Item five	
Primary communication of relevant information	6
Other communication of relevant information	4
Total	50 marks

Question 9.

Family room			
Details			Marks
Part (a)			
Discuss two reasons why zinc is a suitable cladding material for modern homes.			
Reason 1			6
Reason 2			6
Sub-total			12
Part (b)			
Two modifications to the family room that would allow for additional natural light and access to the rear garden.			
Modification 1 (light/access)	sketch + notes	(8 + 5 marks)	13
Modification 2 (light/access)	sketch + notes	(8 + 5 marks)	13
Sub-total			26
Part (c)			
Two advantages of providing access to the rear garden from the family room.			
Advantage 1			6
Advantage 2			6
Sub-total			12
Total			50 marks



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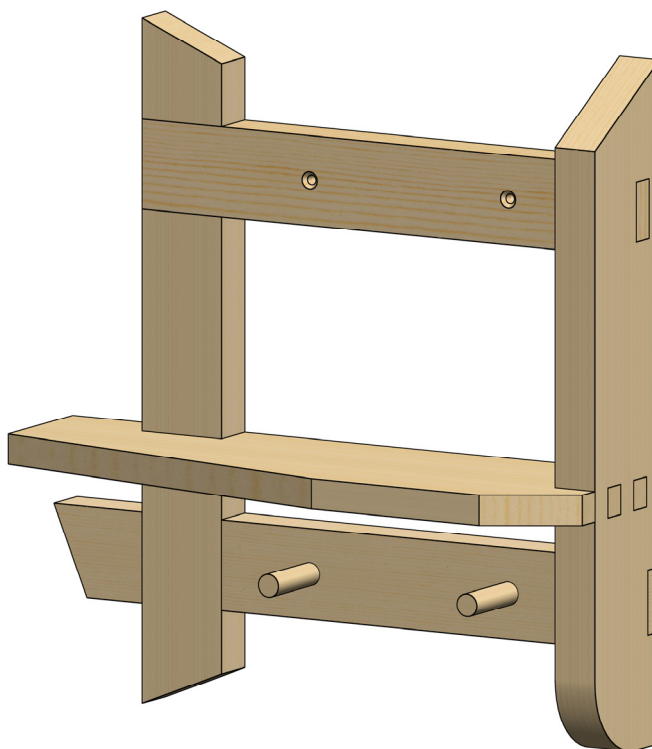
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Construction Studies

Practical Test

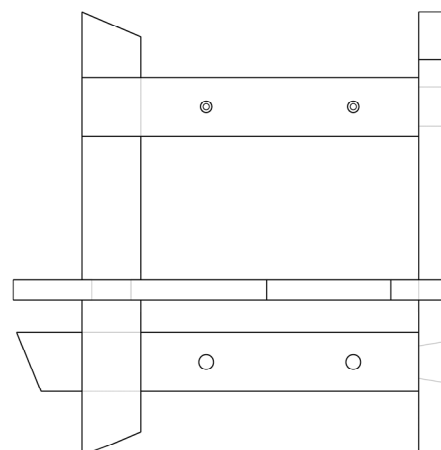
Common Level

(150 marks)



Marking Scheme

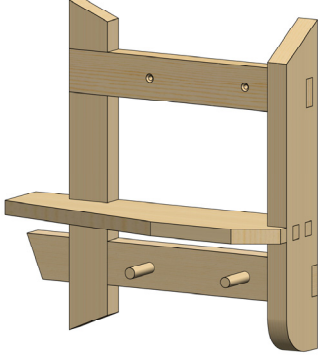
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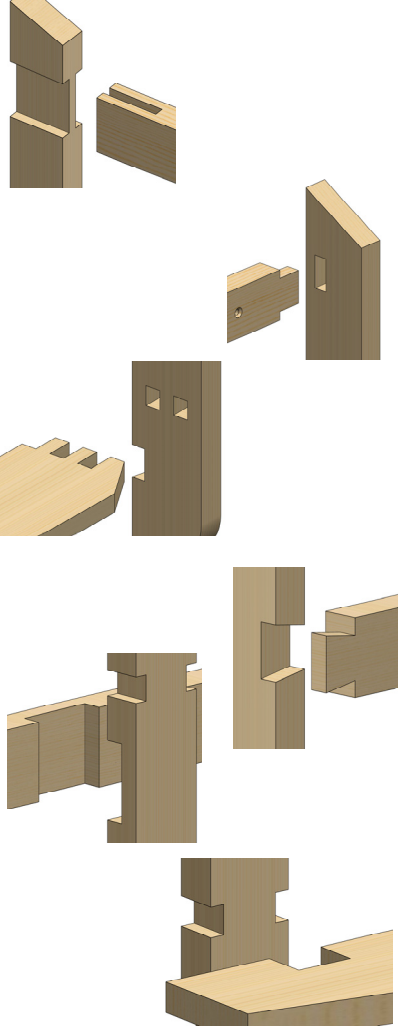


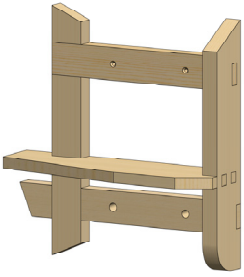
Marking Scheme – Practical Test

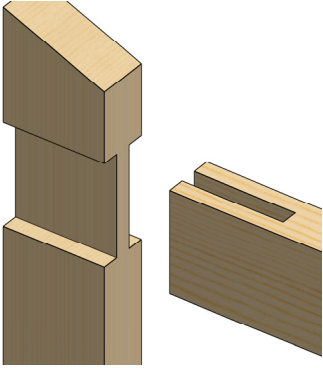
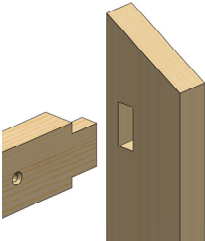
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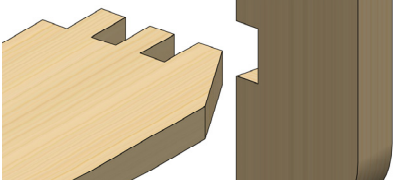
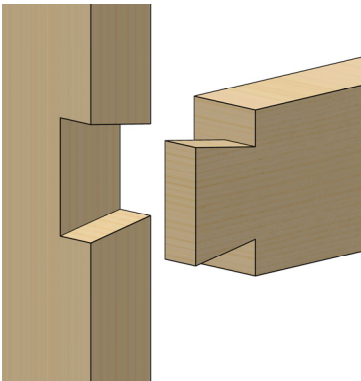
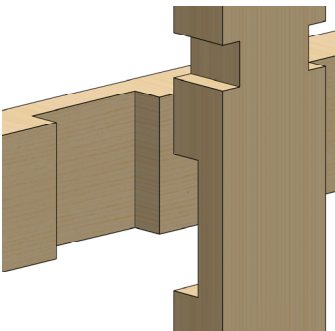
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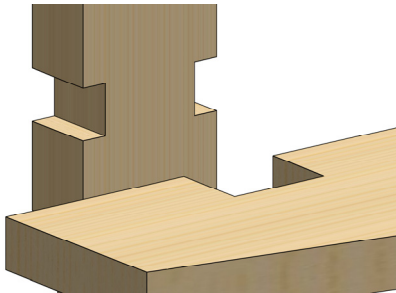
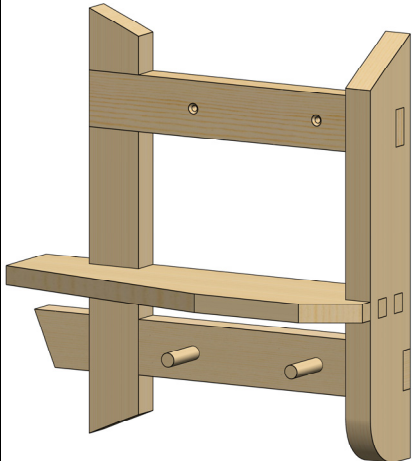
	(i)	Overall Assembly	Marks
	a.	Overall quality of assembled artefact	10
	b.	Design and applied shaping to edges • design <i>2 x 1 mark</i> • shaping <i>2 x 1 mark</i>	4
		Total	14

	(ii)	Marking Out	Marks
	a.	Bridle joint • trenches <i>2 x 2 marks</i> • bridle <i>3 marks</i>	7
	b.	Bare faced mortice and tenon joint • mortice <i>3 marks</i> • tenon <i>3 marks</i>	6
	c.	Double mortice and tenon joint • mortices <i>2 x 3 marks</i> • tenons <i>5 marks</i>	11
	d.	Dovetail joint • tail <i>3 marks</i> • trench <i>3 marks</i>	6
	e.	Cross halving joint • trenches <i>2 x 2 marks</i>	4
	f.	Housing joint • trenches <i>3 x 2 marks</i>	6

	g.	Slopes and curve • slopes • curve <i>6 × 1 mark</i> <i>2 marks</i>	8
	Total		48

Processing of Awards Display			
Bridle joint	(iii)	Processing	Marks
	a.	Trenches • sawing across the grain • paring of trenches to depth <i>4 × 1 mark</i> <i>2 × 2 marks</i>	8
	b.	Bridle • sawing with the grain • paring bridle <i>2 × 1 mark</i> <i>2 marks</i>	4
	Total		12
Bare face mortice & tenon	(iv)	Processing	Marks
	a.	Mortice <i>3 marks</i>	3
	b.	Tenon <i>6 marks</i>	6
	Total		9

Double mortice and tenon	(v)	Processing	Marks
	a.	Mortices remove mortices 2×3 marks	6
	b.	Tenons - sawing with the grain 5×1 mark - sawing across the grain 1 mark - vertical paring 2×2 marks	10
	Total		16
Dovetail joint	(vi)	Processing	Marks
	a.	Dovetail - sawing of dovetail 4×1 mark - paring dovetail 2×2 marks	8
	b.	Dovetail trench - sawing across the grain 2×1 mark - paring of trench to depth 2 marks	4
	Total		12
Cross halving joint	(vii)	Processing	Marks
	a.	Trenches - sawing across the grain 4×1 mark - paring of trenches to depth 2×2 marks	8
	Total		8

Housing joint	(viii)	Processing	Marks
	a.	Trench (shelf) - sawing across the grain2 x 1 mark - Paring of trench to depth2 marks	4
	b.	Trenches (vertical piece) - sawing across the grain4 x 1 mark - paring of trenches to depth2 x 2 marks	8
	Total		12
Shaping & drilling	(ix)	Processing	Marks
	a.	Short slopes5 x 1 mark	5
	b.	Long slope2 marks	2
	c.	Curve2 marks	2
	d.	Drill and countersink screw holes accurately2 x 2 marks	4
	e.	Dowels - cut dowels to length2 x 1 mark - drill dowel holes accurately2 x 2 marks	6
	Total		19
	Overall Completion of Piece		Marks
	Grand Total		150



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State Examinations Commission

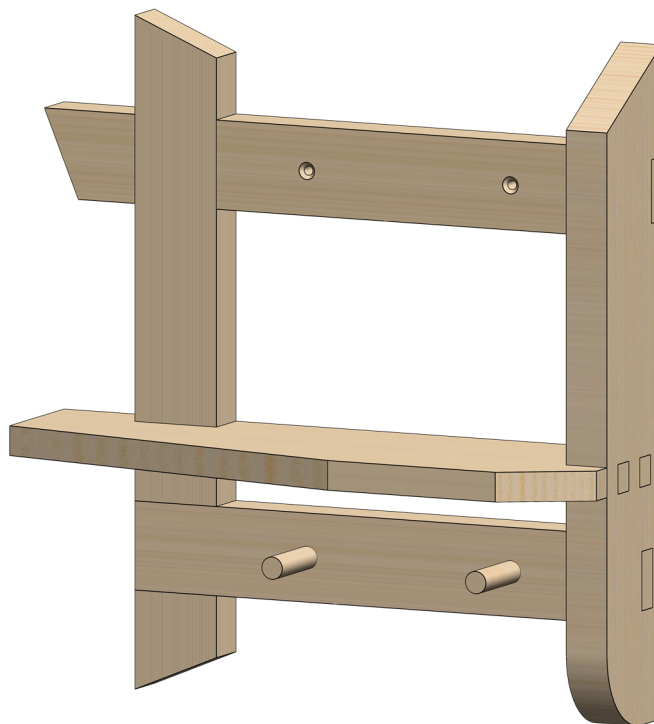
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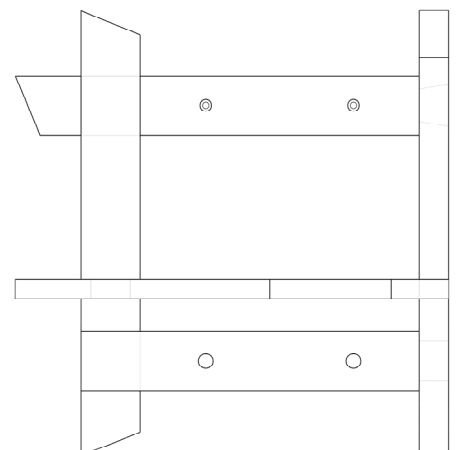
Common Level

(150 marks)



Marking Scheme

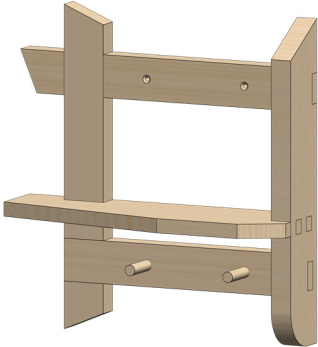
Day 2

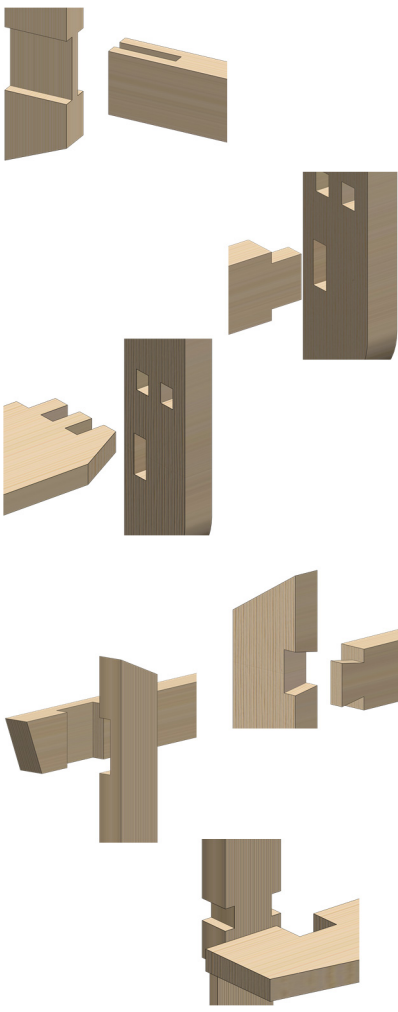


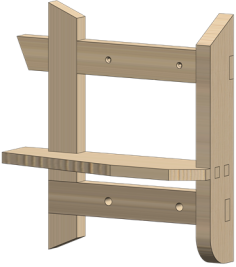
Marking Scheme – Practical Test

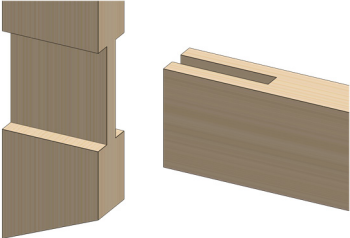
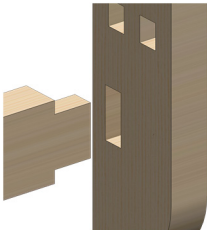
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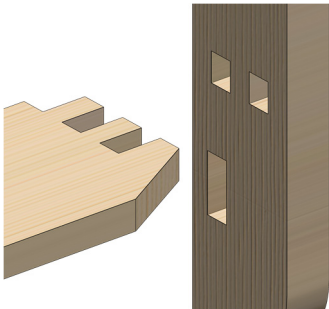
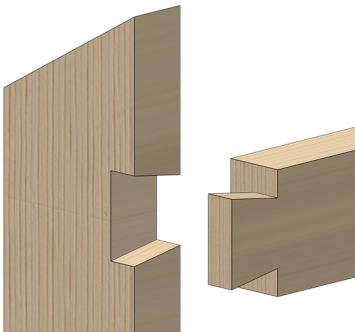
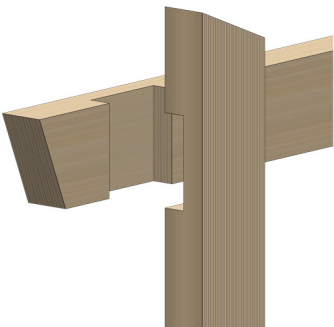
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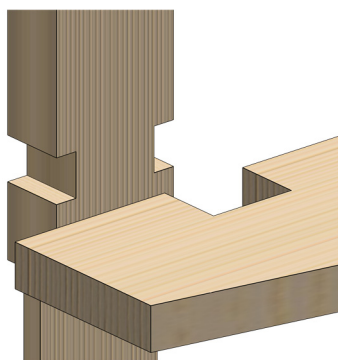
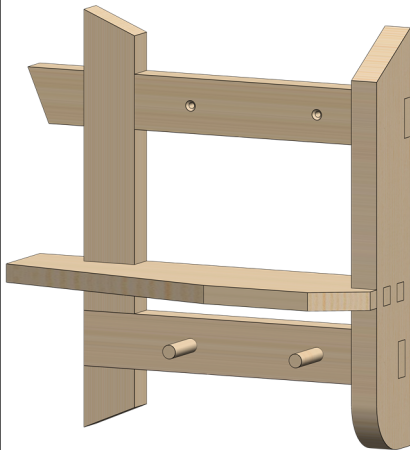
	(i)	Overall Assembly	Marks
	a.	Overall quality of assembled artefact	10
	b.	Design and applied shaping to edges • design <i>2 x 1 mark</i> • shaping <i>2 x 1 mark</i>	4
	Total		14

	(ii)	Marking Out	Marks
	a.	Bridge joint • trenches <i>2 x 2 marks</i> • bridge <i>3 marks</i>	7
	b.	Bare faced mortice and tenon joint • mortice <i>3 marks</i> • tenon <i>3 marks</i>	6
	c.	Double mortice and tenon joint • mortices <i>2 x 3 marks</i> • tenons <i>5 marks</i>	11
	d.	Dovetail joint • tail <i>3 marks</i> • trench <i>3 marks</i>	6
	e.	Cross halving joint • trenches <i>2 x 2 marks</i>	4
	f.	Housing joint • trenches <i>3 x 2 marks</i>	6

	g.	Slopes and curve • slopes • curve <i>6 × 1 mark</i> <i>2 marks</i>	8
	Total		48

Processing of Awards Display			
Bridle joint	(iii)	Processing	Marks
	a.	Trenches • sawing across the grain • paring of trenches to depth <i>4 × 1 mark</i> <i>2 × 2 marks</i>	8
	b.	Bridle • sawing with the grain • paring bridle <i>2 × 1 mark</i> <i>2 marks</i>	4
	Total		12
Bare face mortice & tenon	(iv)	Processing	Marks
	a.	Mortice <i>3 marks</i>	3
	b.	Tenon <i>6 marks</i>	6
	Total		9

Double mortice and tenon	(v)	Processing	Marks
	a.	Mortices remove mortices $2 \times 3 \text{ marks}$	6
	b.	Tenons - sawing with the grain $5 \times 1 \text{ mark}$ - sawing across the grain 1 mark - vertical paring $2 \times 2 \text{ marks}$	10
	Total		16
Dovetail joint	(vi)	Processing	Marks
	a.	Dovetail - sawing of dovetail $4 \times 1 \text{ mark}$ - paring dovetail $2 \times 2 \text{ marks}$	8
	b.	Dovetail trench - sawing across the grain $2 \times 1 \text{ mark}$ - paring of trench to depth 2 marks	4
	Total		12
Cross halving joint	(vii)	Processing	Marks
	a.	Trenches - sawing across the grain $4 \times 1 \text{ mark}$ - paring of trenches to depth $2 \times 2 \text{ marks}$	8
	Total		8

Housing joint	(viii)	Processing	Marks
	a.	Trench (shelf) - sawing across the grain2 x 1 mark - Paring of trench to depth2 marks	4
	b.	Trenches (vertical piece) - sawing across the grain4 x 1 mark - paring of trenches to depth2 x 2 marks	8
	Total		12
Shaping & drilling	(ix)	Processing	Marks
	a.	Short slopes5 x 1 mark	5
	b.	Long slope2 marks	2
	c.	Curve2 marks	2
	d.	Drill and countersink screw holes accurately2 x 2 marks	4
	e.	Dowels - cut dowels to length2 x 1 mark - drill dowel holes accurately2 x 2 marks	6
	Total		19
	Overall Completion of Piece		Marks
	Grand Total		150



Coimisiún na Scrúduithe Stáit
State Examinations Commission

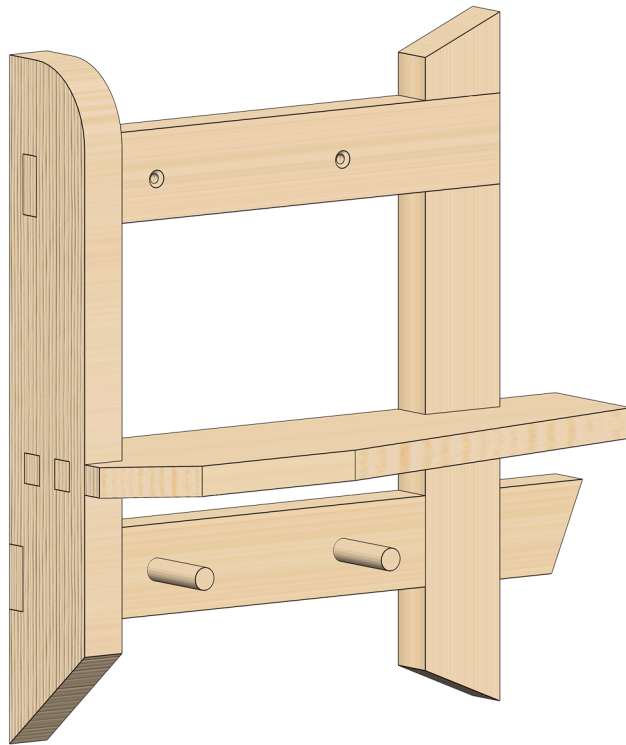
Leaving Certificate Examination 2024

Construction Studies

Practical Test

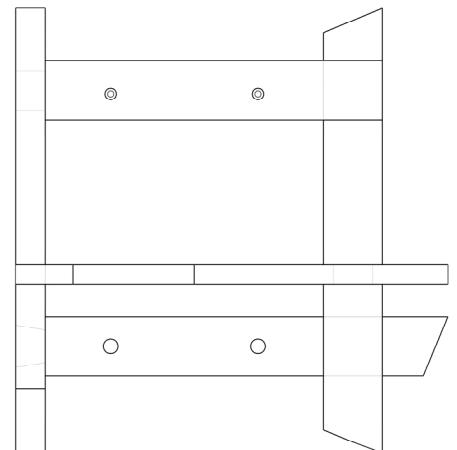
Common Level

(150 marks)



Marking Scheme

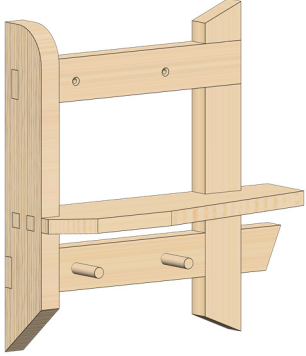
Day 3

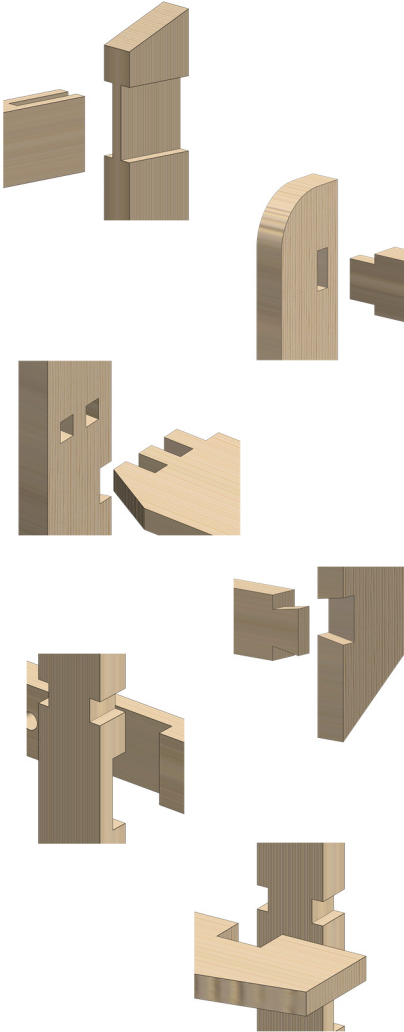


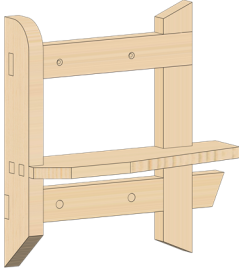
Marking Scheme – Practical Test

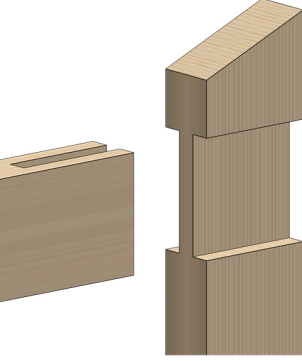
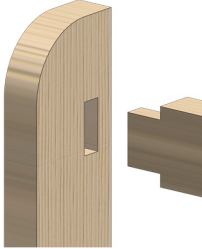
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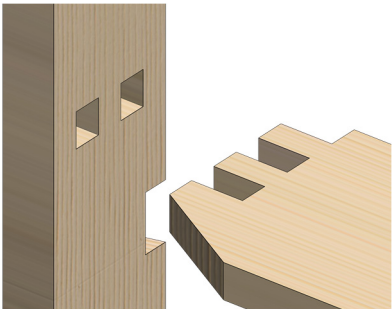
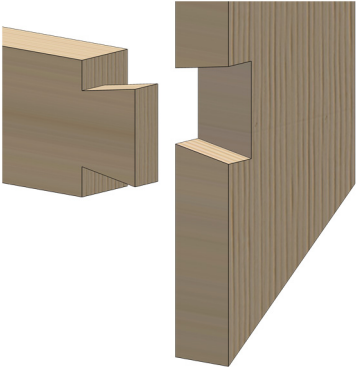
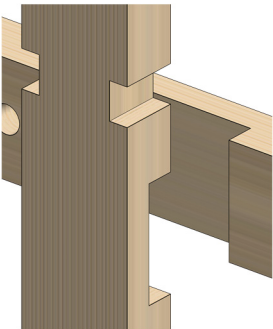
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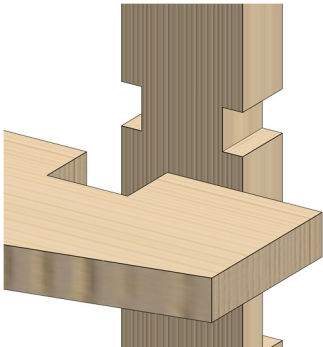
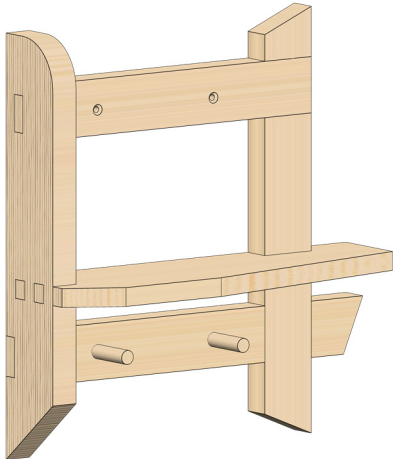
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	a.	Overall quality of assembled artefact	10
	b.	Design and applied shaping to edges • design <i>2 x 1 mark</i> • shaping <i>2 x 1 mark</i>	4
	Total		14

	(ii)	Marking Out	Marks
	a.	Bridge joint • trenches <i>2 x 2 marks</i> • bridge <i>3 marks</i>	7
	b.	Bare faced mortice and tenon joint • mortice <i>3 marks</i> • tenon <i>3 marks</i>	6
	c.	Double mortice and tenon joint • mortices <i>2 x 3 marks</i> • tenons <i>5 marks</i>	11
	d.	Dovetail joint • tail <i>3 marks</i> • trench <i>3 marks</i>	6
	e.	Cross halving joint • trenches <i>2 x 2 marks</i>	4
	f.	Housing joint • trenches <i>3 x 2 marks</i>	6

	g.	Slopes and curve • slopes • curve <i>6 × 1 mark</i> <i>2 marks</i>	8
	Total		48

Processing of Awards Display			
Bridle joint	(iii)	Processing	Marks
	a.	Trenches • sawing across the grain • paring of trenches to depth <i>4 × 1 mark</i> <i>2 × 2 marks</i>	8
	b.	Bridle • sawing with the grain • paring bridle <i>2 × 1 mark</i> <i>2 marks</i>	4
	Total		12
Bare face mortice & tenon	(iv)	Processing	Marks
	a.	Mortice <i>3 marks</i>	3
	b.	Tenon <i>6 marks</i>	6
	Total		9

Double mortice and tenon	(v)	Processing	Marks
	a.	Mortices remove mortices $2 \times 3 \text{ marks}$	6
	b.	Tenons - sawing with the grain $5 \times 1 \text{ mark}$ - sawing across the grain 1 mark - vertical paring $2 \times 2 \text{ marks}$	10
	Total		16
Dovetail joint	(vi)	Processing	Marks
	a.	Dovetail - sawing of dovetail $4 \times 1 \text{ mark}$ - paring dovetail $2 \times 2 \text{ marks}$	8
	b.	Dovetail trench - sawing across the grain $2 \times 1 \text{ mark}$ - paring of trench to depth 2 marks	4
	Total		12
Cross halving joint	(vii)	Processing	Marks
	a.	Trenches - sawing across the grain $4 \times 1 \text{ mark}$ - paring of trenches to depth $2 \times 2 \text{ marks}$	8
	Total		8

Housing joint	(viii)	Processing	Marks
	a.	Trench (shelf) - sawing across the grain2 x 1 mark - Paring of trench to depth2 marks	4
	b.	Trenches (vertical piece) - sawing across the grain4 x 1 mark - paring of trenches to depth2 x 2 marks	8
	Total		12
Shaping & drilling	(ix)	Processing	Marks
	a.	Short slopes5 x 1 mark	5
	b.	Long slope2 marks	2
	c.	Curve2 marks	2
	d.	Drill and countersink screw holes accurately2 x 2 marks	4
	e.	Dowels - cut dowels to length2 x 1 mark - drill dowel holes accurately2 x 2 marks	6
	Total		19
	Overall Completion of Piece		Marks
	Grand Total		150



Leaving Certificate Examination
Construction Studies
Practical Coursework
Marking Scheme

Marking Criteria		Marks
A	Planning of Project • Coursework selection, exploration and management planning • Investigation and relevant research • Design development through annotated sketches, with working drawing(s) and/or models	40
B	Report • Sequence of manufacture including photographic evidence and/or sketches • Critical appraisal and conclusions from coursework experience • Overall quality of communication and presentation of the design folio	35
C	Manipulative Skills • Marking-out of materials • Processing and assembly of materials • Range and depth of skills evident in the artefact	40
D	Completion of Project • Artefact well finished • Creativity and appropriateness of coursework • Overall quality, coherence and presentation of coursework	35
Total		150

Note: *While the general headings and marks above will largely remain the same, breakdowns may vary for any given year.*

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