



**Coimisiún na Scrúduithe Stáit**  
State Examinations Commission

**Leaving Certificate 2019**

**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.

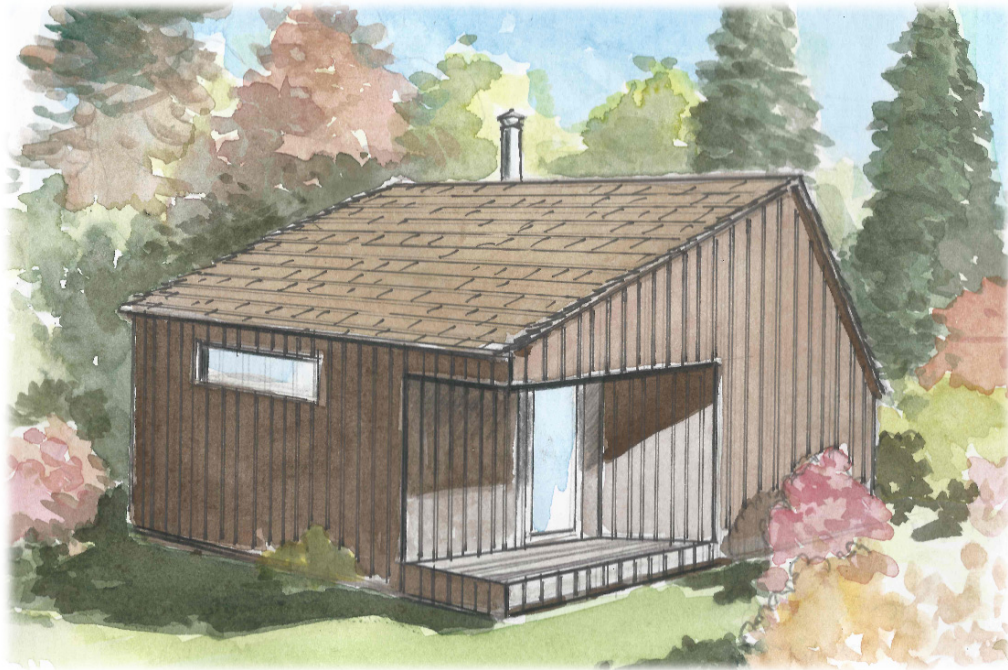
## **Future Marking Schemes**

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.



**Coimisiún na Scrúduithe Stáit**  
**State Examinations Commission**

*Leaving Certificate, 2019*



# *Construction Studies*

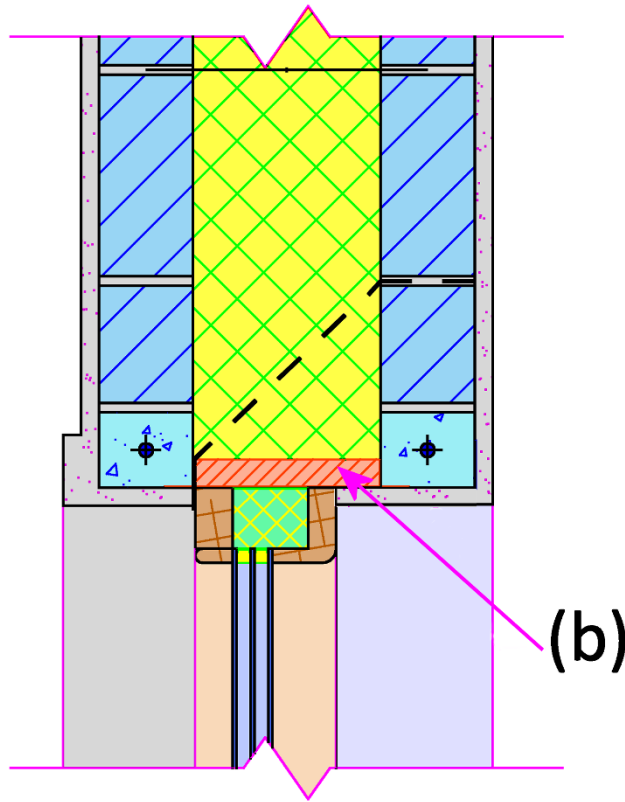
## *Theory – Ordinary Level*

### *Marking Scheme*

**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 top portion of the window**



Specification – typical detail

- 19 mm external render
- Concrete block outer leaf 100 mm
- Full-fill insulated cavity
- Stepped DPC
- Concrete block inner leaf 100 mm
- 15 mm internal plaster
- Prestressed concrete lintels 100 × 70 mm
- Window head 150 × 80 mm
- Triple glazing low e glass
- Glazing bead.

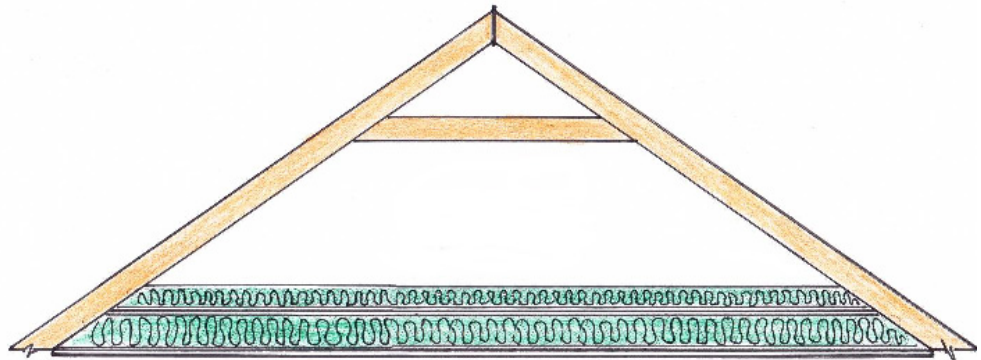
*N.B. Any alternative detailing which complies with current Building Regulations is acceptable.*

**(b) Show clearly on your drawing the typical design detailing to close the cavity at the window head**

- Fitting a proprietary fire stop cavity closer in the cavity above the window head
- Fixing plasterboard to inside reveal.

## Question 2.

(a) Show how to insulate the attic space to a high standard.



### Method

- The insulation quilt is placed between the joists above the plasterboard
- A further layer is placed above the bottom layer.

### Type of insulation

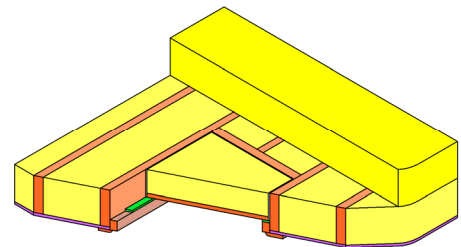
- Fibre glass insulation
- Rock wool
- Hemp insulation.

### Thickness of insulation

- Minimum thickness of insulation used is 350 mm.

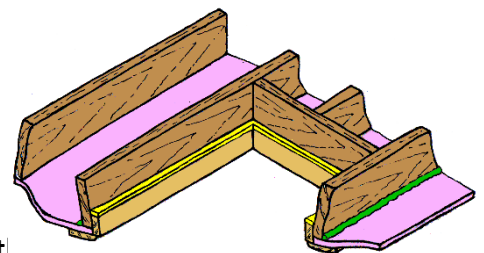
(b) Show one method of insulating the trapdoor

- Fit pre-insulated trapdoor.
- Layers of solid insulation fitted to the upper face.
- Layers glued to the trapdoor.



### Show one method of sealing the trap door.

- Fit weather stripping around the edge of the trap door
- Seal any gaps between the frame and the joists to prevent any air penetration



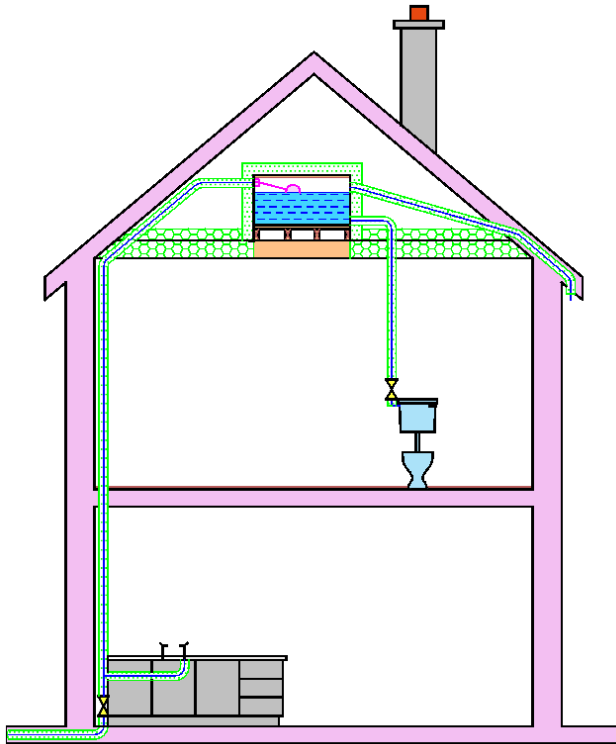
(c) Two reasons why the couple should begin by insulating t

- The greatest heat loss is through the roof, up to 30% of heat is lost
- Insulation reduces the heat loss
- Most effective way to save energy inside the home
- It is relatively easy to insulate the attic and can be carried out by the home owner provided the necessary precautions are taken
- Increased thermal comfort for occupants
- Energy bills are reduced
- It is better for the environment
- It improves the Building Energy Rating (BER).
- The house will be warmer
- Storage tank and associated piping is generally in the attic.

*Any other suitable reason will be accepted*

### Question 3.

(a) Pipework required to supply cold water to the kitchen sink and a toilet cistern.



**Typical details:**

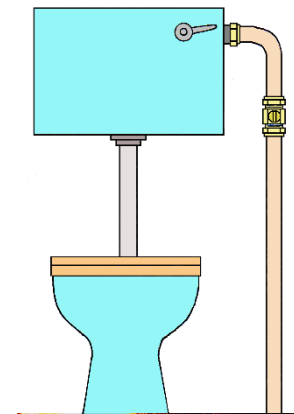
- Stop valve
- Connection to kitchen sink
- 15 mm rising main
- Ball-valve
- Cold water storage tank 230 litres min
- Insulation around storage tank
- 28 mm overflow
- Gate valve
- 15 mm cold water supply
- Connection to WC.

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

(b) Preferred location of the valve shown.

**Reason:**

- The valve is fitted close to the cistern
- The valve is fitted within easy reach to operate the valve.



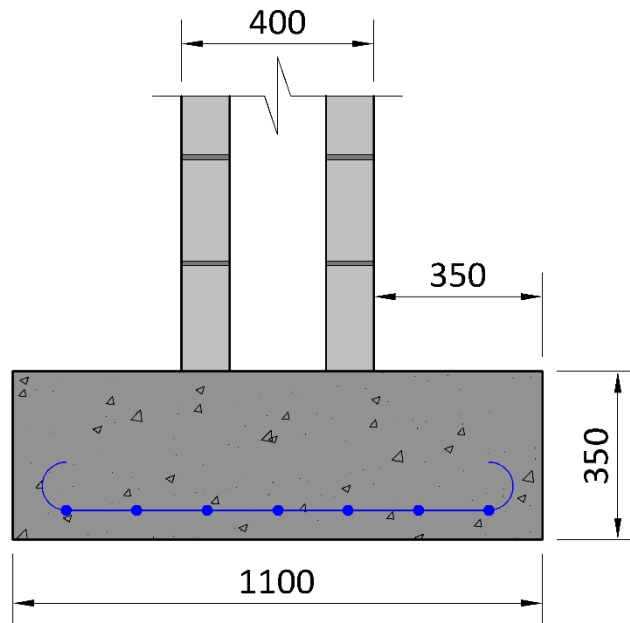
(c) One advantage of installing a dual-flush toilet cistern in a bathroom.

- The cistern has two buttons allowing the user to choose between two water flush settings
- A larger flush of about 6-9 litres is designed for solid waste
- The smaller flush of 3-4 litres is designed for liquid waste
- The cistern is more environmentally friendly than conventional cisterns
- This type of cistern reduces the amount of water used
- It also reduces the amount of water entering waste treatment and sewage systems.

*Any other suitable detail will be accepted*

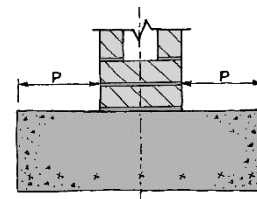
### Question 4.

(a) Sketches show the typical construction details of the strip foundation supporting the concrete block wall.



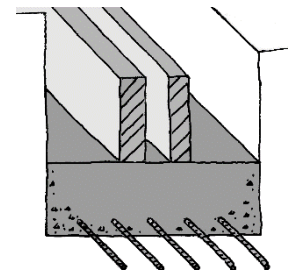
#### Position of the wall

- The wall must be positioned in the centre of the foundation
- The projections on both sides of the wall 'P' must be equal.



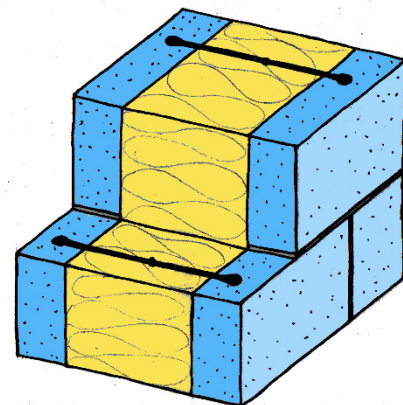
#### Position of the reinforcement steel

- Roped reinforcing steel bars are placed near the bottom of the trench where the main tensile strength is needed
- Concrete is poured and compacted around the reinforcing steel
- Five steel rods, diameter 12 mm, are generally used
- Concrete bricks or other similar material may be used to hold the bars in place when the concrete is being poured, approximately 75 mm above the ground



(b) Show one method of connecting the inner and outer leaves of the wall.

- Wall ties are used in cavity walls
- Wall ties are used to join the two leaves of a cavity wall together
- Wall ties provide stability to cavity walls
- Wall ties are built into the leaves during construction
- The wall ties are made from corrosion and fire resistant materials
- Basalt fibre wall ties are used in high insulated walls



**(c) Two advantages of using ready mix concrete for foundations.**

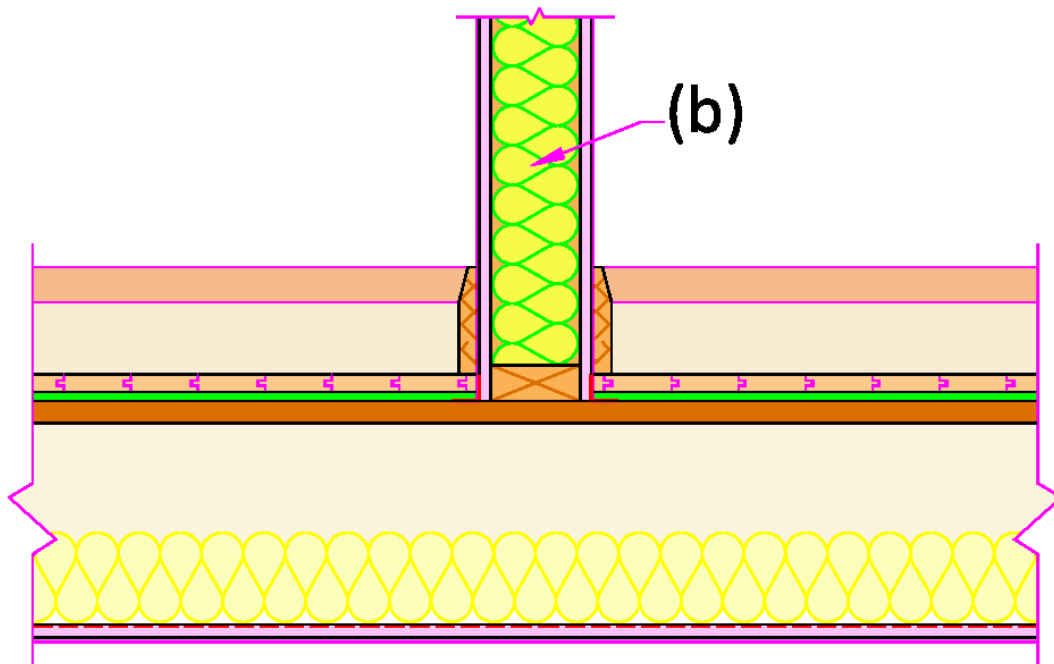
- The quality of the concrete is more consistent
- Ready mixed concrete is produced under controlled conditions
- The cost of labour to produce concrete is eliminated
- Wastage of concrete materials is down to a minimum
- Ready mixed concrete is a fast and reliable method of producing concrete
- Not necessary to store concrete materials on site
- Dust pollution is reduced on site – ready mixed concrete uses bulk cement instead of bags of cement
- Ready mixed concrete is environmentally friendly.

*Any other suitable detail will be accepted*



## Question 5.

- (a) Draw a vertical section through the first floor and the stud partition – typical details.



### Specifications:

- Stud partition 63 to 100 mm × 38 to 50 mm
- Insulation between studs
- Plasterboard 12.5 mm
- Skirting board 120 mm × 20 mm
- Floating tongued and grooved timber floor
- Floor underlay
- Plywood 25 mm
- Joists 200 mm × 50 mm
- Insulation between joists 150 mm
- Vapour barrier
- Plasterboard, plaster.

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

- (b) Show on your drawing the position of the insulation in the partition

- The insulation is fitted between the studs
- Insulated plasterboard fixed to both sides of the stud partition.

## Question 6.

- (a) **Two specific precautions that should be observed in the construction Studies room in each of the following situation.**

### **Using a contact adhesive to glue veneers**

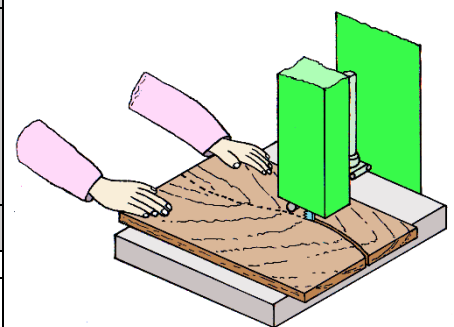
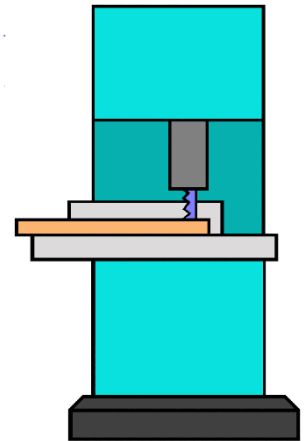
- Carry out the work in a well-ventilated area
- Keep the glue away from sources of ignition
- Put on safety goggles, a mask and latex gloves
- Read the instructions on the container for use and storage
- Do not inhale the fumes
- Avoid contact with the skin
- Keep out of the reach of children
- Discard any glue that has expired in an appropriate and safe way.

### **Using a battery-powered screwdriver**

- Ensure the work is firmly held on a solid surface or fixed in a vice
- Never hold the piece you are working on in your hand
- Select the correct size of bit for the screw being used
- The screwdriver tip should be fitted fully into the screw head before starting the battery powered screwdriver
- Apply firm pressure and press the trigger lightly when starting
- Set to the highest torque when removing screws
- Concentrate on the work being carried out
- Make sure your finger is away from the trigger when changing bits
- Always store the charger unit away safely when finished.

- (b) Three specific safety precautions to be observed when operating a bandsaw to cut a piece of wood.  
Give one reason for each safety precaution.

<b>General Safety Precautions</b>	
<b>Safety precaution</b>	Permission must be sought from teacher before using the band saw
<b>Reason</b>	To ensue safe operations of the equipment
<b>Safety precaution</b>	Close fitting/protective clothing must be worn
<b>Reason</b>	To avoid loose clothes being caught in the blade
<b>Safety precaution</b>	Long and loose hair must be contained
<b>Reason</b>	To avoid hair being caught in the blade
<b>Safety precaution</b>	With the motor turned off, students must place the wood flat on the band saw table. Set the blade guard to within 3-6 mm of the wood.
<b>Reason</b>	To make sure the safety guard is set in place before starting the saw
<b>Safety precaution</b>	Start up the band saw and wait until the motor is at full speed before beginning any cut
<b>Reason</b>	To prevent the blade jamming the wood
<b>Safety precaution</b>	At no time during any of your cuts should your hands be any closer than 100 mm from the blade. If stock is closer than 100 mm, do so only with a push stick.
<b>Reason</b>	To avoid accidently cutting your hands
<b>Safety precaution</b>	You should never place your hand directly in the cut line.
<b>Reason</b>	To avoid accidently cutting your hands
<b>Safety precaution</b>	Do not attempt to flick away pieces of wood from the blade with your fingers. Use another piece of wood or a push stick
<b>Reason</b>	To avoid accidently cutting your hands



<b>Safety precaution</b>	When finished switch off, reset all guards to a fully closed position and leave machine in a safe, clean and tidy state.
<b>Reason</b>	Good woodwork room practice to avoid accidents.
<b>Personal Protection Equipment</b>	
<b>Safety precaution</b>	Eye protection must be worn - wear safety glasses
<b>Reason</b>	To prevent splinters or dust getting into eyes
<b>Safety precaution</b>	Dust mask may be worn.
<b>Reason</b>	To prevent inhaling dust.
<b>Safety precaution</b>	Rings and jewellery must not be worn when using this machine
<b>Reason</b>	To prevent getting caught in the machine
<b>Safety precaution</b>	Hearing protection may be worn
<b>Reason</b>	To prevent hearing damage if the noise is above 60 decibels.



**(c) Two reasons why safety instruction is necessary for all students prior to using machinery in a Construction Room.**

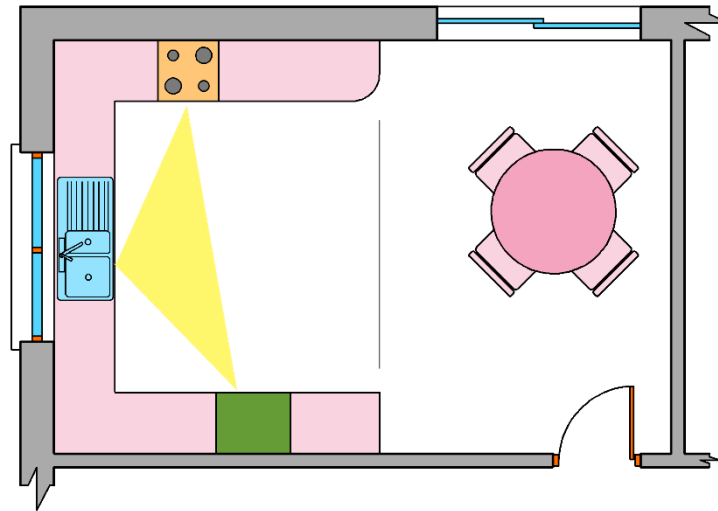
Possible Reasons:

- To avoid accidents when using machinery in a Construction Room
- To prevent serious injury being caused by moving parts of machinery
- To make sure all users understand the dangers of machinery in a Construction room
- To provide a safe environment for all students using machinery in a Construction Room
- To comply with Health and Safety regulations for a Construction Room.

*Any other suitable reason will be accepted*

## Question 7.

- (a) Draw a freehand sketch of the kitchen design and show your preferred location for the cooker, fridge and sink. Give one your reason for selecting each location.



### Sink

- Natural light is available to the sink S at the window
- It is pleasant for the person using the sink
- It is close to the cooker, less than 2 metres
- It is good to have a view to the garden or lawn
- It forms part of the triangle design for kitchens
- There is ample worktop space at either side.

### Cooker

- There is worktop space at either side of the cooker C
- It forms part of the triangle for kitchen layout
- It avoids crossing the kitchen with hot pans or pots
- It is a safe location in relation to the door opening
- It is within easy reach of the sink.

### Fridge

- The fridge F is near the sink for food preparation
- It forms part of the working triangle
- It has worktop space at either side
- The worktop provides space to unpack shopping
- The length of each side of the triangle must not exceed 6 metres.

*Or other suitable locations*

- (b) Select a suitable floor type for the kitchen area A and a different floor type for the dining area B. Discuss one reason for each floor type selected.

### Kitchen area A

#### Ceramic tiles

- Tiles are hard wearing,
- Tiles are impervious to water
- Are easy to maintain
- Tiles are durable
- Available in a wide variety of styles and colour.

**Stone**

- Examples: polished granite, marble, limestone and slate.
- These floors are hardwearing and durable.

**Marmoleum**

- More for industrial use but may be used in kitchens
- Hardwearing, waterproof and available in variety of colours.

*Other suitable coverings*

**Dining area B****Wood laminate**

- Laminate is very durable and can withstand considerable wear
- The floor surface requires less maintenance than natural wood
- The cost of this floor is less than a solid wood floor
- Liquids will not cause the same damage as they would to a natural wood floor

**Vinyl**

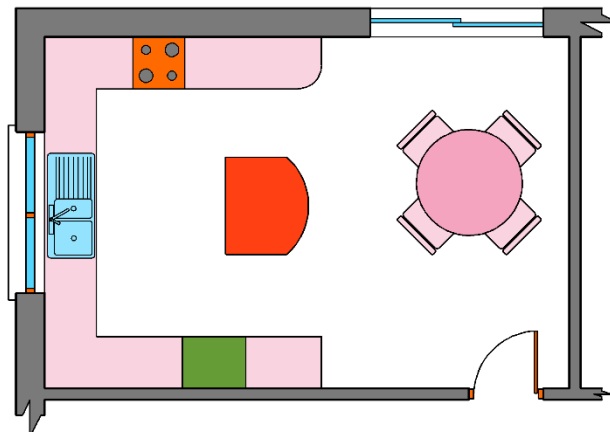
- Vinyl resists scuffs and stains in normal use
- Water will not easily discolour the floor surface
- The floor is easy to maintain
- There are a wide variety of colours and patterns available

**Marmoleum**

- More for industrial use but may be used in kitchens
- Hardwearing, waterproof and available in variety of colours.

*Other suitable coverings*

- (c) Draw a sketch of the outline design and position of an island unit for the kitchen area A.

**Discuss one advantage of including an island unit in the kitchen:**

- An island unit allows extra seating in the kitchen area
- Extra storage space in the kitchen
- Appliances could be incorporated in the island unit
- Additional worktop space
- Greater design flexibility in the kitchen area.

## Question 8.

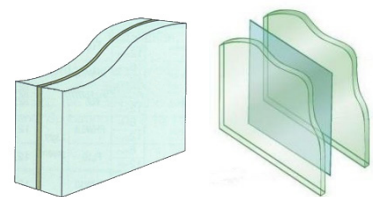
### Carbon monoxide alarm

- A carbon monoxide detector or CO<sub>2</sub> detector is a device that detects the presence of the carbon monoxide (CO<sub>2</sub>) gas
- CO<sub>2</sub> detector is designed to measure carbon monoxide (CO<sub>2</sub>) levels over time
- Sounds an alarm before dangerous levels of carbon monoxide (CO<sub>2</sub>) accumulate in a room
- To prevent carbon monoxide poisoning
- CO<sub>2</sub> is a colourless, tasteless and odourless
- It is often referred to as the "silent killer".



### Laminated safety glass

- Laminated safety glass is a type of glass that holds together when shattered or in the event of breaking
- It is held in place by an interlayer between the sheets of glass.
- Manufactured from polyvinyl butyral (PVB) or ethylene-vinyl acetate (EVA).



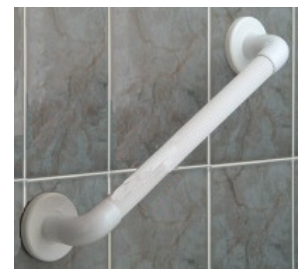
### Sapwood

- This is the outer area of the cross section of a tree
- This layer contains the sap and the new wood
- It is the newer wood
- It is lighter in colour
- Sapwood is softer and less durable



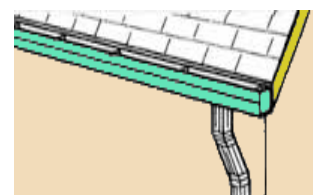
### Grab rail

- A grabrail is used for support
- Grab rails are safety devices designed to enable a person to maintain balance
- Helps to lessen fatigue while standing
- To transfer some of their weight while manoeuvring
- Used to grip in case of a slip or fall.
- Workers may use a grab rail as they climb or in case of a fall
- It is usually made of stainless steel, chromed or plastic-coated metal.



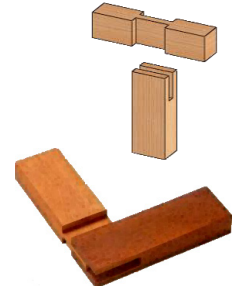
### Eaves gutter

- Rainwater from pitched or flat roofs is collected in the gutter
- The rainwater is discharged to an outlet or downpipe
- The eaves gutter is generally fixed to the fascia board
- The eaves gutter is part of the water collection system for a building.
- Gutters are made from a variety of materials such as: cast iron, uPVC, cast and extruded aluminium, galvanized steel, copper, zinc, and bamboo.



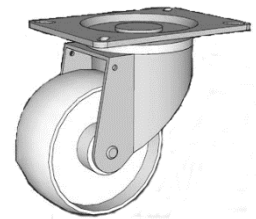
### Bridle joint

- A bridle joint is a woodworking joint
- The joint can be a Tee-bridle or Corner bridle joint
- Bridle Joints are used in furniture making.
- Joining method for any corner angle or Tee type of frame joint configuration
- The corner bridle joint can be used in frame construction
- The Tee bridle can be used in table construction to join rails to uprights
- The tee bridle joint is a very strong joint



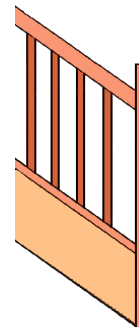
### Furniture castor

- Furniture castor consist of a wheel and a fixing plate or screw
- Castors are used in tables, chairs, office desks and several other types of furniture
- Castors allow the easy movement of furniture
- Furniture castors are from a variety of materials such as cast iron, plastic, nylon, forged steel, stainless steel, aluminium, etc.



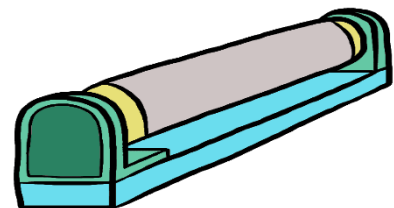
### Balusters

- They are made of hardwood or softwood
- They stand vertically between the string of the stairs and the handrail
- Balusters act as support for the handrail
- The balusters are generally 38 x 38 or 44 x 44 mm
- Balusters may be square in section or turned on a lathe
- The space between the balusters should be not more than 100 mm.



### Fluorescent lighting

- A fluorescent lighting uses fluorescence to produce light
- It is a low-pressure mercury-vapour gas discharge lamp
- It produces a short-wave ultraviolet light that causes a phosphor coating on the inside of the lamp to glow
- When the light is turned on the starter sends a jolt of electricity to the gas inside the tube
- The fluorescent lighting costs more initially but the lower energy costs offset the initial costs
- Fluorescent lighting is considered adequate for many workplaces and also in the home.

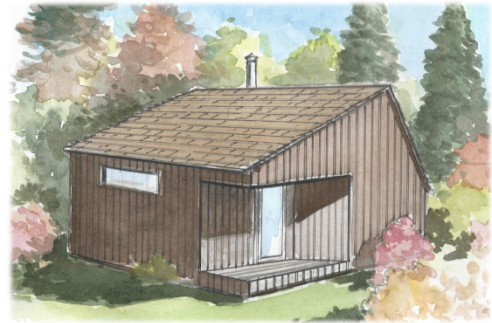




### Question 9.

(a) Specify a suitable wood for the external cladding

- Cedar
- Larch
- Red deal or Scots pine
- Any pressure impregnated softwood.



Two reasons for choice of wood

**Cedar**

- Ideal for outdoor as it is very resistant to decay
- Easy to work and glue together
- Pleasant appearance
- Easily finished with oil or other suitable treatment
- It is lightweight making it suitable for cladding.

**Larch**

- Naturally durable for outdoor use
- Looks well with red heartwood
- Is easily grown in Ireland
- It is resistant to water.

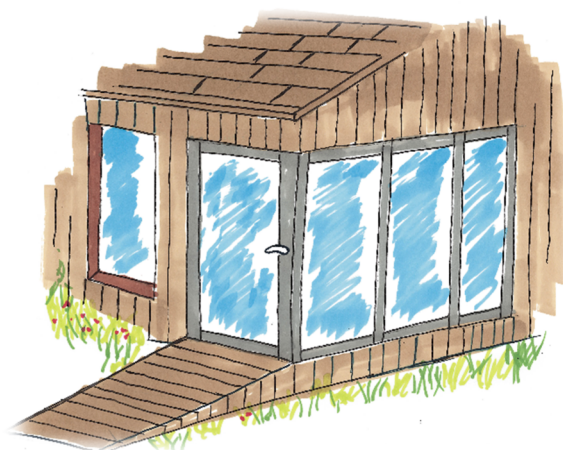
**Red deal or Scots pine**

- Easy to cut and work
- Provides a good finish when painted or varnished
- Reasonably priced
- Strong durable and stable.

*Any other suitable wood*

(b) One modification to the existing design that would help link the home office to the garden

- Replace existing door with a sliding door
- The area outside the door could be changed into a porch or patio
- Double glazed clear glass full height panels
- The existing window could be replaced with a larger taller unit
- All units would be double, or triple glazed.



**(c) Two advantages for the user of linking the home office to the surrounding garden.**

**Advantages:**

- The double-glazed glass will provide a warmer structure
- Make the garden area part of the office
- They create a bigger floor area
- They create a connection with the garden area
- People arriving into have a rest area
- Allows sunlight and light into the building
- Allows wheelchair access

*Any other valid reason*

**Question 1.**

<b>Vertical section through the top portion of the window</b>		
Details - typical sizes		Marks
<b>Part (a)</b>		
External plaster 19 mm		<b>5</b>
Concrete block outer leaf 100 mm		<b>5</b>
Thermal insulation 200 mm		<b>5</b>
Stepped DPC/ Cavity tie		<b>5</b>
Concrete block inner leaf 100 mm		<b>5</b>
Internal plaster 15 mm		<b>5</b>
Pre-stressed concrete lintels 100 × 70 mm		<b>5</b>
Window head 150 × 80 mm		<b>5</b>
Triple glazing low e glass		<b>5</b>
<b><i>Any 7 of the above details (5 marks each)</i></b>	<b>Sub-total</b>	<b>35</b>
Any 4 typical dimensions		<b>4</b>
	<b>Sub-total</b>	<b>39</b>
<b>Part (b)</b>		
Show clearly on your drawing the typical design detailing to ensure that the cavity is closed at the window head.		
Cavity closer detail		<b>3</b>
<b>Draughting, accuracy and scale</b>	<i>(excellent, good, fair)</i> <b>8      6      4</b>	<b>8</b>
	<b>Sub-total</b>	<b>11</b>
	<b>Total</b>	<b>50 marks</b>

**Question 2.**

<b>Insulating the attic space of a house</b>	
<b>Details</b>	<b>Marks</b>
<b>Part (a)</b>	
Show how to insulate the attic space to a high standard	
Draw sketch of insulated attic space	<b>8</b>
Preferred insulation type for attic space	<b>5</b>
Thickness of insulation	<b>5</b>
<b>Quality of sketch</b>	<i>(excellent, good, fair)</i> <b>8      6      4</b>
<b>Sub-total</b>	<b>26</b>
<b>Part (b)</b>	
Show one method of insulating and sealing the attic trapdoor	
Insulating the trapdoor Valid detail one	<b>5</b>
Sealing the trapdoor Valid detail two	<b>5</b>
<b>Quality of sketch</b>	<i>(excellent, good, fair)</i> <b>8      6      4</b>
<b>Sub-total</b>	<b>18</b>
<b>Part (c)</b>	
Two reasons why the couple should begin by insulating the attic space	
Advantage 1	<b>3</b>
Advantage 2	<b>3</b>
<b>Sub-total</b>	<b>6</b>
<b>Total</b>	<b>50 marks</b>

**Question 3.**

<b>Cold water supply for a domestic house</b>		
Details – typical sizes		Marks
<b>Part (a)</b>		
Pipework required to supply cold water to the kitchen sink and a toilet cistern.		
Draw given sketch		4
15 mm rising main		4
15 mm cold water feed to kitchen sink		4
Water storage tank		4
Ball valve in storage tank		4
28 mm Overflow		4
Insulation around storage tank		4
15 mm cold water supply to cistern		4
Valves		4
<i>Any 7 of the above details (4 marks each)</i>	<b>Sub-total</b>	<b>28</b>
<b>Quality of sketch</b>	<i>(excellent, good, fair)</i>	<b>6</b>
	<i>6      4      2</i>	
	<b>Sub-total</b>	<b>34</b>
<b>Part (b)</b>		
Preferred location and reason for the valve shown		
Location		3
Reason		3
<b>Quality of sketches</b>	<i>(excellent, good, fair)</i>	<b>6</b>
	<i>6      4      2</i>	
	<b>Sub-total</b>	<b>12</b>
<b>Part (c)</b>		
One advantage of installing a dual-flush toilet cistern in a bathroom		
Advantage		4
	<b>Sub-total</b>	<b>4</b>
	<b>Total</b>	<b>50 marks</b>

**Question 4.**

<b>Reinforced Concrete Strip foundation</b>	
Details	Marks
<b>Part (a)</b>	
Show the typical construction details of the strip foundation supporting the concrete block wall	
Sketch of a strip foundation	<b>11</b>
Position of walls on strip foundation	<b>6</b>
Location of steel reinforcement	<b>6</b>
Three typical dimensions	<b>3</b>
<b>Quality of sketches</b>	<i>(excellent, good, fair)</i>
	<b>6      4      2</b>
<b>Sub-total</b>	<b>32</b>
<b>Part (b)</b>	
Show one method of connecting the inner and outer leaves of the wall	
Method of connecting inner and outer leaves	<b>4</b>
<b>Quality of sketches</b>	<i>(excellent, good, fair)</i>
	<b>6      4      2</b>
<b>Sub-total</b>	<b>10</b>
<b>Part (c)</b>	
Two advantages of using ready mix concrete for foundations	
Advantage 1	<b>4</b>
Advantage 2	<b>4</b>
<b>Sub-total</b>	<b>8</b>
<b>Total</b>	<b>50 marks</b>

**Question 5.**

<b>Vertical section through the first floor and the stud partition</b>		
Details - typical sizes		Marks
<b>Part (a)</b>		
Draw a vertical section, parallel to the joists, through the floor and the stud partition		
Upper floor joists 200 mm × 50 mm		5
Insulation between joists 150 mm		5
Plywood 25 mm		5
Ceiling plasterboard, plaster and vapour barrier		5
Stud partition 100 mm × 50 mm		5
Stud soleplate 100 mm × 50 mm		5
Plasterboard 12.5 mm on partition		5
Floor underlay		5
Floating tongued and grooved timber floor		5
Skirting board 120 mm × 20 mm		5
<i>Any 7 of the above details (5 marks each)</i>	<b>Sub-total</b>	<b>35</b>
Any <b>three</b> typical dimensions		<b>3</b>
	<b>Sub-total</b>	<b>38</b>
<b>Part (b)</b>		
Show on your drawing the position of the insulation in the partition		
Insulation in stud partition		4
<b>Draughting, accuracy and scale</b>	<i>(excellent, good, fair)</i> <b>8      6      4</b>	<b>8</b>
	<b>Sub-total</b>	<b>12</b>
	<b>Total</b>	<b>50 marks</b>

**Question 6.**

<b>Health and Safety</b>	
Details	Marks
<b>Part (a)</b>	
State <b>two</b> specific safety precautions to be observed in the Construction Studies classroom	
<b>Using contact adhesive to glue veneers:</b>	
Precaution 1	<b>4</b>
Precaution 2	<b>4</b>
<b>Using a battery powered screwdriver:</b>	
Precaution 1	<b>4</b>
Precaution 2	<b>4</b>
<b>Sub-total</b>	<b>16</b>
<b>Part (b)</b>	
Describe <b>three</b> specific safety precautions to be observed when operating a bandsaw to cut a piece of wood	
Precaution <b>one</b> and valid reason	<b>6</b>
Precaution <b>two</b> and valid reason	<b>6</b>
Precaution <b>three</b> and valid reason	<b>6</b>
<b>Quality of sketches</b>	<i>(excellent, good, fair)</i> <b>8      6      4</b>
<b>Sub-total</b>	<b>26</b>
<b>Part (c)</b>	
<b>Two</b> reasons why safety instruction is necessary for all students prior to using machinery	
Reason 1	<b>4</b>
Reason 2	<b>4</b>
<b>Sub-total</b>	<b>8</b>
<b>Total</b>	<b>50 marks</b>



### Question 7.

<b>Kitchen and dining area design</b>	
Details	Marks
<b>Part (a)</b>	
Draw sketch of kitchen design and show preferred location for the cooker, fridge and sink	
Draw sketch of the given kitchen and dining area	4
Location and valid reason for cooker position (3 + 1 marks)	4
Location and valid reason for fridge position (3 + 1 marks)	4
Location and valid reason for sink position (3 + 1 marks)	4
<b>Quality of sketches</b> <span style="float: right;"><i>(excellent, good, fair)</i></span>	<b>8</b>
<span style="float: right;">8      6      4</span>	
<b>Sub-total</b>	<b>24</b>
<b>Part (b)</b>	
Suitable floor type for the kitchen area <b>A</b> and another appropriate floor type for the dining area <b>B</b>	
Suitable flooring type for Kitchen area <b>A</b>	3
Reason for flooring type in Kitchen <b>A</b>	3
Suitable flooring type for Dining area <b>B</b>	3
Reason for flooring type in Dining <b>B</b>	3
<b>Sub-total</b>	<b>12</b>
<b>Part (c)</b>	
Position of island unit in the kitchen area	
Outline design and position of island unit	4
Advantage of including island unit	4
<b>Quality of sketches</b> <span style="float: right;"><i>(excellent, good, fair)</i></span>	<b>6</b>
<span style="float: right;">6      4      2</span>	
<b>Sub-total</b>	<b>14</b>
<b>Total</b>	<b>50 marks</b>

**Question 8.**

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

**Question 9.**

<b>Eco-friendly home office in a garden setting</b>	
Details	Marks
<b>Part (a)</b>	
Suitable wood for the external cladding and two reasons for your choice of wood	
Suitable wood for external cladding	6
Valid reason one	6
Valid reason two	6
<b>Sub-total</b>	<b>18</b>
<b>Part (b)</b>	
<b>One</b> modification to the existing design that would help link the home office to the garden	
Modification to existing office <i>(6 notes + 6 sketches)</i>	<b>12</b>
<b>Quality of sketches</b> <span style="float: right;"><i>(excellent, good, fair)</i></span>	<b>8</b>
	<i>8      6      4</i>
<b>Sub-total</b>	<b>20</b>
<b>Part (c)</b>	
<b>Two</b> advantages for the home office user of increasing the visual connection with the garden	
Advantage 1	6
Advantage 2	6
<b>Sub-total</b>	<b>12</b>
<b>Total</b>	<b>50 marks</b>

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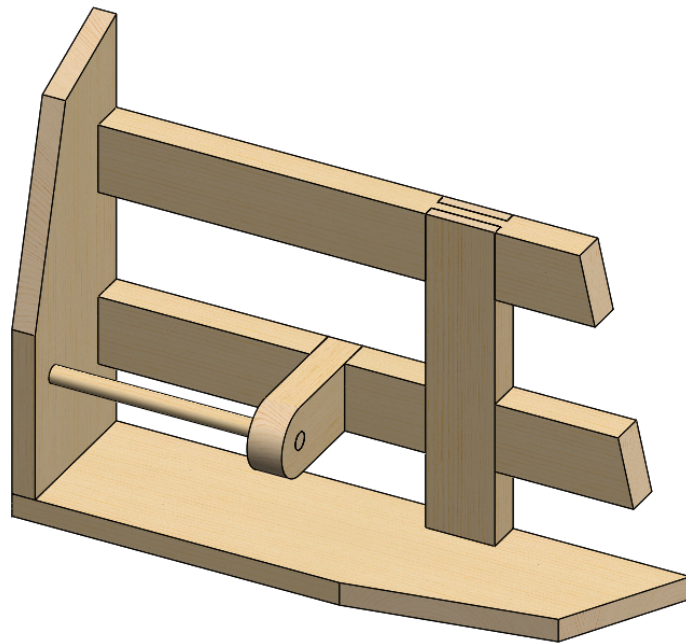
**Leaving Certificate Examination, 2019**

# **Construction Studies**

## **Practical Test**

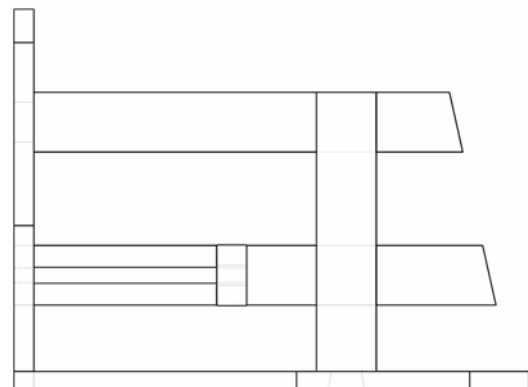
**Common Level**

*(150 marks)*



**Marking Scheme**

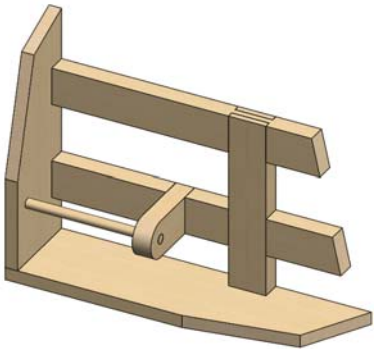
**Day 1**

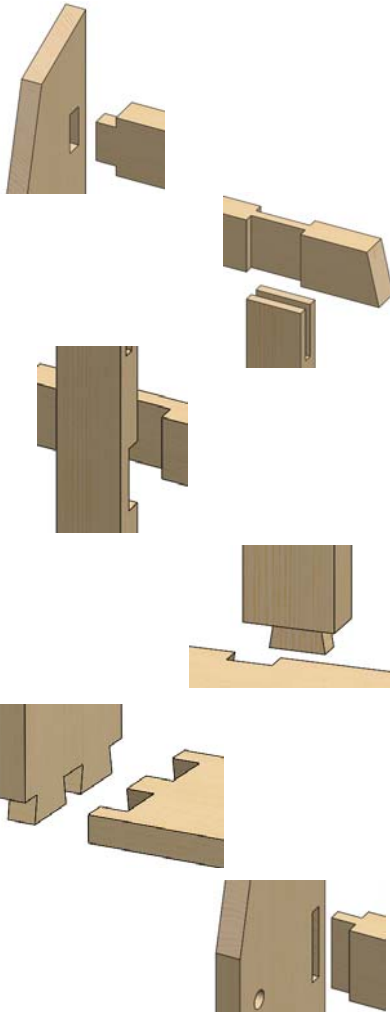


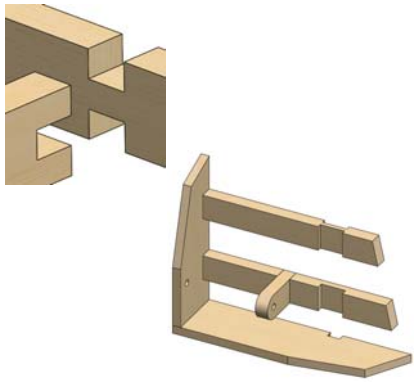
# Marking Scheme – Practical Test

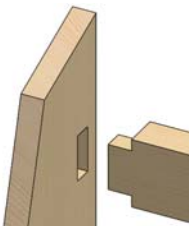
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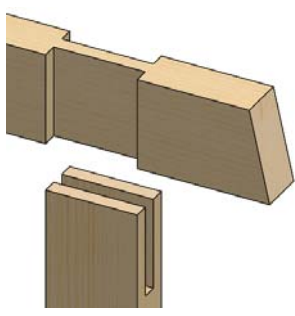
- The artefact is to be hand produced by candidates without the assistance of machinery.
- However the use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that procedure.

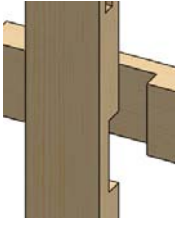
	<b>(i)</b>	<b>OVERALL ASSEMBLY</b>	<b>MARK</b>
	a.	Overall quality of assembled artefact	<b>10</b>
	b.	Design and applied shaping to edges <ul style="list-style-type: none"> <li>• design <i>3 marks</i></li> <li>• shaping <i>3 marks</i></li> </ul>	<b>6</b>
	<b>Total</b>		<b>16</b>

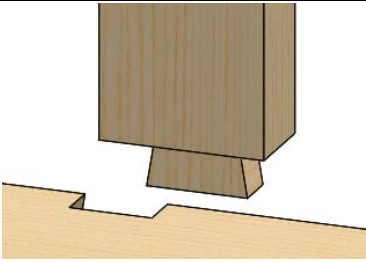
	<b>(ii)</b>	<b>MARKING OUT</b>	<b>Marks</b>
	a.	Bare Faced Mortice and Tenon <ul style="list-style-type: none"> <li>• mortice <i>3 marks</i></li> <li>• tenon <i>3 marks</i></li> </ul>	<b>6</b>
	b.	Top Bridle Joint <ul style="list-style-type: none"> <li>• trench <i>2 x 2 marks</i></li> <li>• bridle - vertical piece <i>2 marks</i></li> </ul>	<b>6</b>
	c.	Cross Halving Joint <ul style="list-style-type: none"> <li>• trench - horizontal piece <i>2 marks</i></li> <li>• trench - vertical piece <i>2 marks</i></li> </ul>	<b>4</b>
	d.	Dovetail <ul style="list-style-type: none"> <li>• tail <i>3 marks</i></li> <li>• trench <i>3 marks</i></li> </ul>	<b>6</b>
	e.	Box Dovetail <ul style="list-style-type: none"> <li>• tails <i>2 x 2 marks</i></li> <li>• pins <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	f.	Mortice and Tenon <ul style="list-style-type: none"> <li>• mortice <i>2 marks</i></li> <li>• tenon <i>2 marks</i></li> </ul>	<b>4</b>

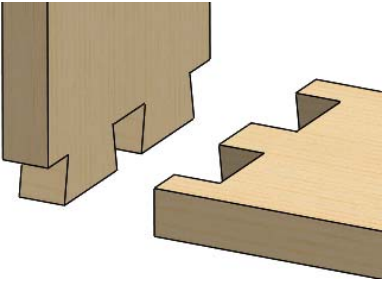
	g.	<b>Bridle Joint</b> <ul style="list-style-type: none"> <li>trenches <i>2 × 2 marks</i></li> <li>bridle <i>2 marks</i></li> </ul>	<b>6</b>
	h.	<b>Slopes and Curve</b> <ul style="list-style-type: none"> <li>slopes <i>6 × 1 mark</i></li> <li>curve <i>2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>48</b>

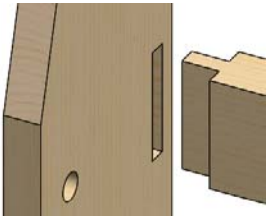
<b>Bare Faced Mortice and Tenon</b>	<b>(iii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortice <i>3 marks</i>	<b>3</b>
	b.	Tenon <i>6 marks</i>	<b>6</b>
	<b>Total</b>		<b>9</b>

<b>Top Bridle Joint</b>	<b>(iv)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>sawing across the grain <i>4 x1 mark</i></li> <li>paring to trenches to depth <i>2 x 2 mark</i></li> </ul>	<b>8</b>
	b.	<b>Bridle</b> <ul style="list-style-type: none"> <li>sawing with the grain <i>2 × 1 mark</i></li> <li>paring bridle <i>2 marks</i></li> </ul>	<b>4</b>
	<b>Total</b>		<b>12</b>

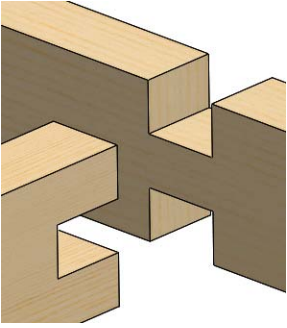
<b>Cross Halving Joint</b>	<b>(v)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>sawing across the grain <i>4 × 1 mark</i></li> <li>paring trenches <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>8</b>

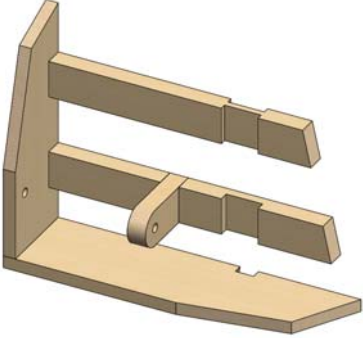
<b>Dovetail Halving</b>	<b>(vi)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tail – vertical piece <ul style="list-style-type: none"> <li>• saw of dovetail <i>4 x 1 mark</i></li> <li>• paring dovetail <i>2 x 1 mark</i></li> </ul>	<b>6</b>
	b.	Dovetail trench <ul style="list-style-type: none"> <li>• sawing across the grain <i>2 x 1 mark</i></li> <li>• paring trench <i>2 marks</i></li> </ul>	<b>4</b>
	<b>Total</b>		<b>10</b>

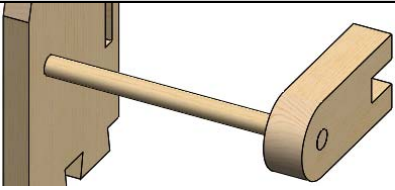
<b>Box Dovetail</b>	<b>(vii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tails <i>2 x 4 marks</i>	<b>8</b>
	b.	Pins <ul style="list-style-type: none"> <li>• sawing with the grain <i>4 x 1 mark</i></li> <li>• sawing/paring across the grain <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>16</b>

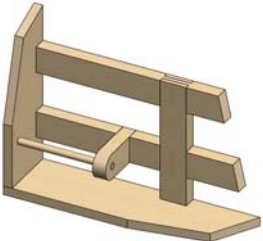
<b>Mortise and Tenon Joint</b>	<b>(viii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortise <i>3 marks</i>	<b>3</b>
	b.	Tenon <i>4 marks</i>	<b>4</b>
	<b>Total</b>		<b>7</b>



<b>Bridle Joint</b>	<b>(ix)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Trenches <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	b.	Bridle <ul style="list-style-type: none"> <li>• vertical sawing <span style="float: right;"><i>2 × 1 mark</i></span></li> <li>• paring bridle <span style="float: right;"><i>2 marks</i></span></li> </ul>	<b>4</b>
	<b>Total</b>		<b>8</b>

<b>Shaping</b>	<b>(x)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Short slopes <span style="float: right;"><i>2 × 1 mark</i></span>	<b>2</b>
	b.	Long slopes <span style="float: right;"><i>4 × 2 marks</i></span>	<b>8</b>
	c.	Curve <span style="float: right;"><i>2 marks</i></span>	<b>2</b>
	<b>Total</b>		<b>12</b>

<b>Drilling</b>	<b>(xi)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Dowel located and fitted correctly <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	<b>Total</b>		<b>4</b>

	<b>OVERALL COMPLETION OF PIECE</b>		<b>Marks</b>
	<b>Grand Total</b>		<b>150</b>

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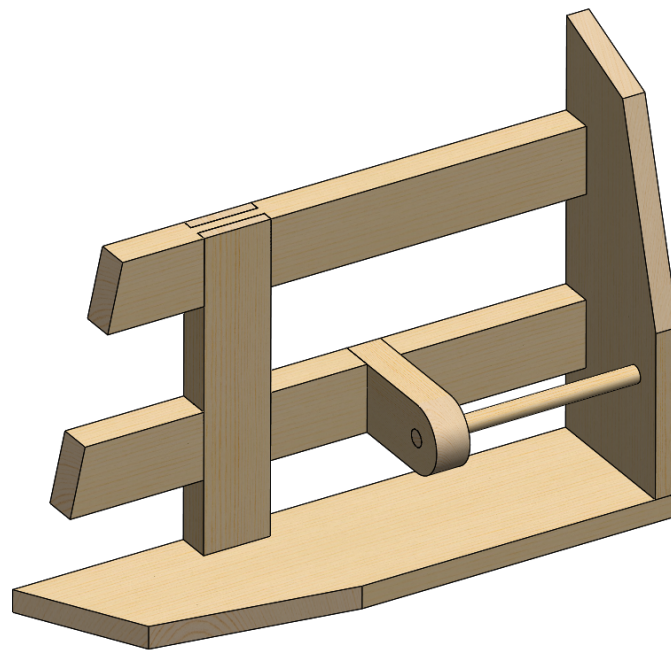
**Leaving Certificate Examination, 2019**

# **Construction Studies**

## **Practical Test**

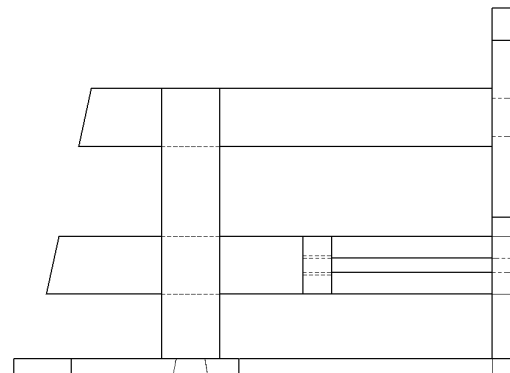
**Common Level**

*(150 marks)*



**Marking Scheme**

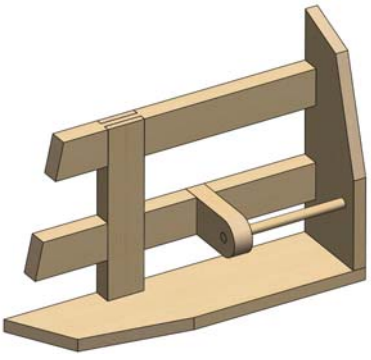
**Day 2**

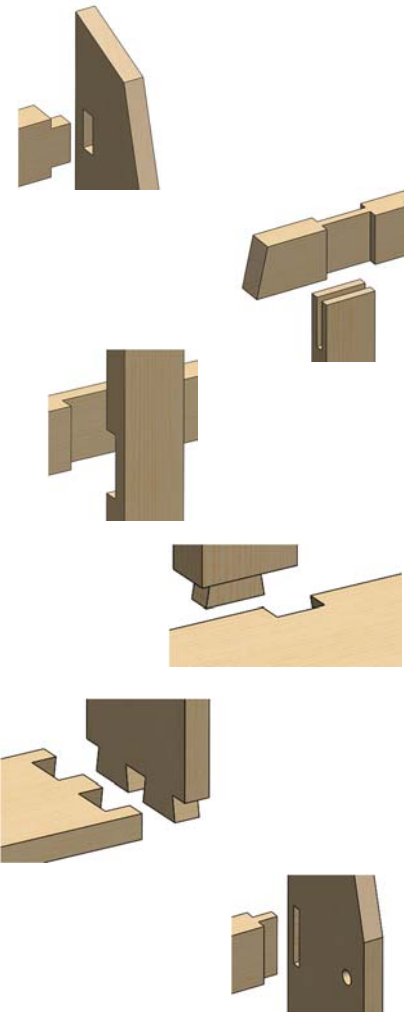


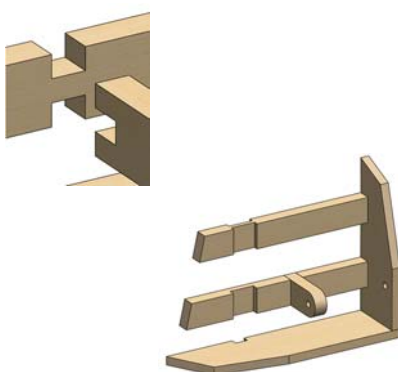
# Marking Scheme – Practical Test

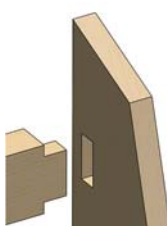
**Note:**

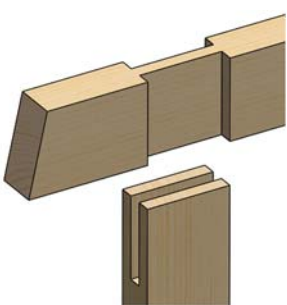
- The artefact is to be hand produced by candidates without the assistance of machinery.
- However the use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that procedure.

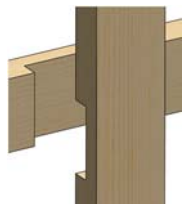
	<b>(i)</b>	<b>OVERALL ASSEMBLY</b>	<b>MARK</b>
	a.	Overall quality of assembled artefact	<b>10</b>
	b.	Design and applied shaping to edges <ul style="list-style-type: none"> <li>• design <i>3 marks</i></li> <li>• shaping <i>3 marks</i></li> </ul>	<b>6</b>
	<b>Total</b>		<b>16</b>

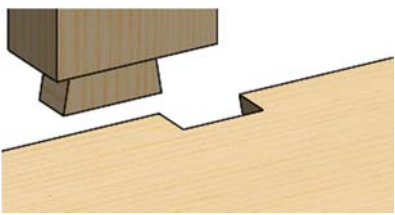
	<b>(ii)</b>	<b>MARKING OUT</b>	<b>Marks</b>
	a.	Bare Faced Mortice and Tenon <ul style="list-style-type: none"> <li>• Mortice <i>3 marks</i></li> <li>• Tenon <i>3 marks</i></li> </ul>	<b>6</b>
	b.	Top Bridle Joint <ul style="list-style-type: none"> <li>• Trench <i>2 x 2 marks</i></li> <li>• Bridle - vertical piece <i>2 marks</i></li> </ul>	<b>6</b>
	c.	Cross Halving Joint <ul style="list-style-type: none"> <li>• Trench - horizontal piece <i>2 marks</i></li> <li>• Trench - vertical piece <i>2 marks</i></li> </ul>	<b>4</b>
	d.	Dovetail <ul style="list-style-type: none"> <li>• Tail <i>3 marks</i></li> <li>• Trench <i>3 marks</i></li> </ul>	<b>6</b>
	e.	Box Dovetail <ul style="list-style-type: none"> <li>• Tails <i>2 x 2 marks</i></li> <li>• Pins <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	f.	Mortice and Tenon <ul style="list-style-type: none"> <li>• Mortice <i>2 marks</i></li> <li>• Tenon <i>2 marks</i></li> </ul>	<b>4</b>

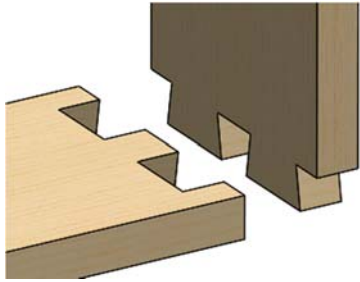
	g.	<b>Bridle Joint</b> <ul style="list-style-type: none"> <li>Trenches <i>2 × 2 marks</i></li> <li>Bridle <i>2 marks</i></li> </ul>	<b>6</b>
	h.	<b>Slopes and Curve</b> <ul style="list-style-type: none"> <li>Slopes <i>6 × 1 mark</i></li> <li>Curve <i>2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>48</b>

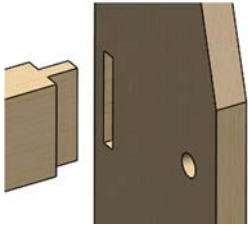
<b>Bare Faced Mortice and Tenon</b>	<b>(iii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortice <i>3 marks</i>	<b>3</b>
	b.	Tenon <i>6 marks</i>	<b>6</b>
	<b>Total</b>		<b>9</b>

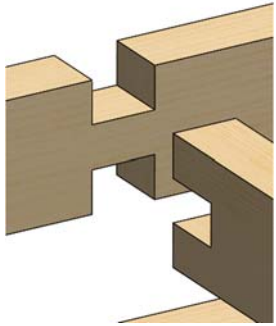
<b>Top Bridle Joint</b>	<b>(iv)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>Sawing across the grain <i>4 x1 mark</i></li> <li>Paring to trenches to depth <i>2 x 2 mark</i></li> </ul>	<b>8</b>
	b.	<b>Bridle</b> <ul style="list-style-type: none"> <li>Sawing with the grain <i>2 × 1 mark</i></li> <li>Paring bridle <i>2 marks</i></li> </ul>	<b>4</b>
	<b>Total</b>		<b>12</b>

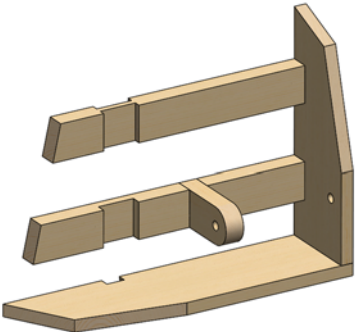
<b>Cross Halving Joint</b>	<b>(v)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>sawing across the grain <i>4 × 1 mark</i></li> <li>paring trenches <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>8</b>

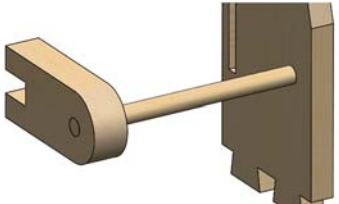
<b>Dovetail Halving</b>	<b>(vi)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tail – vertical piece <ul style="list-style-type: none"> <li>• saw of dovetail <span style="float: right;"><i>4 x 1 mark</i></span></li> <li>• Paring dovetail <span style="float: right;"><i>2 x 1 mark</i></span></li> </ul>	<b>6</b>
	b.	Dovetail trench <ul style="list-style-type: none"> <li>• sawing across the grain <span style="float: right;"><i>2 x 1 mark</i></span></li> <li>• paring trench <span style="float: right;"><i>2 marks</i></span></li> </ul>	<b>4</b>
	<b>Total</b>		<b>10</b>

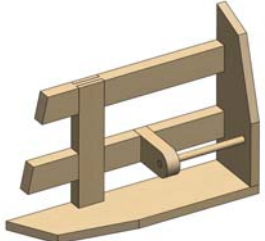
<b>Box Dovetail</b>	<b>(vii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tails <span style="float: right;"><i>2 x 4 marks</i></span>	<b>8</b>
	b.	Pins <ul style="list-style-type: none"> <li>• sawing with the grain <span style="float: right;"><i>4 x 1 mark</i></span></li> <li>• sawing/paring across the grain <span style="float: right;"><i>2 x 2 marks</i></span></li> </ul>	<b>8</b>
	<b>Total</b>		<b>16</b>

<b>Mortise and Tenon Joint</b>	<b>(viii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortise <span style="float: right;"><i>3 marks</i></span>	<b>3</b>
	b.	Tenon <span style="float: right;"><i>4 marks</i></span>	<b>4</b>
	<b>Total</b>		<b>7</b>

Bridle Joint	(ix)	PROCESSING	Marks
	a.	Trenches <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	b.	Bridle <ul style="list-style-type: none"> <li>• Vertical sawing <span style="float: right;"><i>2 × 1 mark</i></span></li> <li>• Paring bridle <span style="float: right;"><i>2 marks</i></span></li> </ul>	<b>4</b>
	<b>Total</b>		<b>8</b>

Shaping	(x)	PROCESSING	Marks
	a.	Short slopes <span style="float: right;"><i>2 × 1 mark</i></span>	<b>2</b>
	b.	Long slopes <span style="float: right;"><i>4 × 2 marks</i></span>	<b>8</b>
	c.	Curve <span style="float: right;"><i>2 marks</i></span>	<b>2</b>
	<b>Total</b>		<b>12</b>

Drilling	(xi)	PROCESSING	Marks
	a.	Dowel located and fitted correctly <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	<b>Total</b>		<b>4</b>

	<b>OVERALL COMPLETION OF PIECE</b>		<b>Marks</b>
	<b>Total Marks</b>		<b>150</b>

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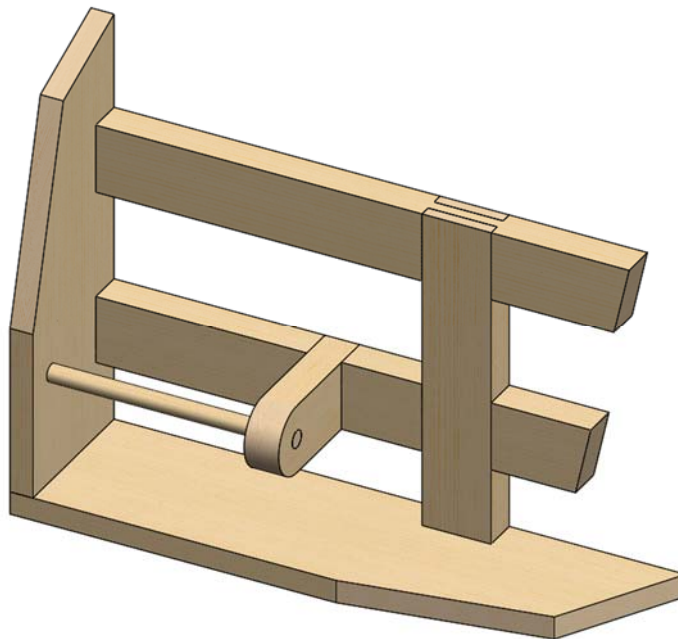
**Leaving Certificate Examination, 2019**

# **Construction Studies**

## **Practical Test**

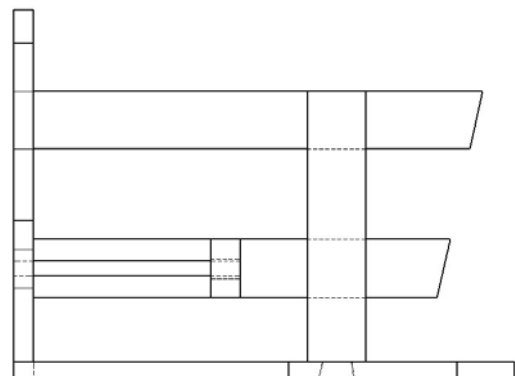
**Common Level**

*(150 marks)*



**Marking Scheme**

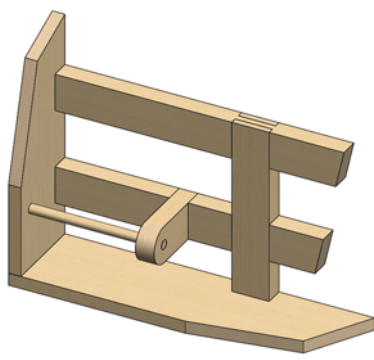
**Day 3**

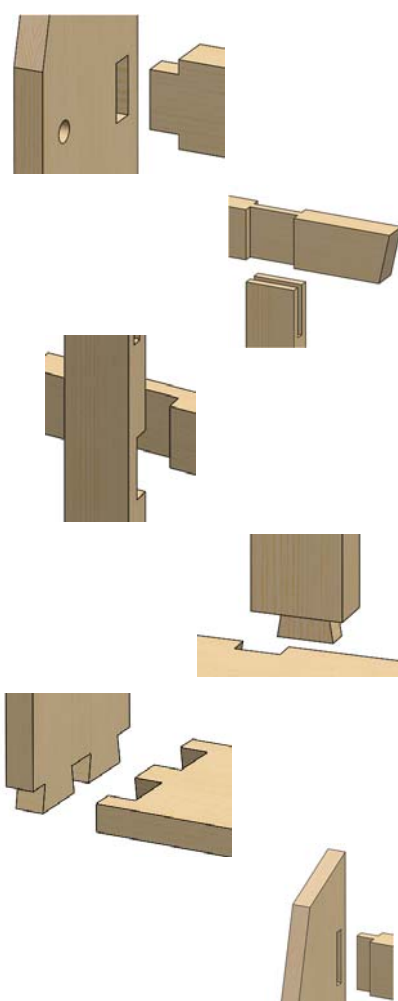


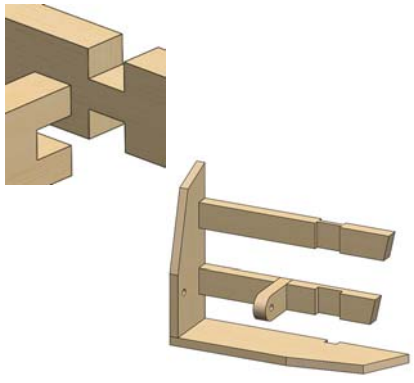
# Marking Scheme – Practical Test

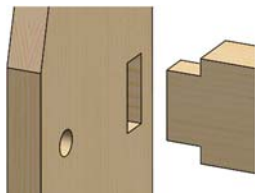
**Note:**

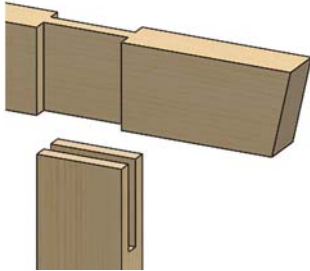
- The artefact is to be hand produced by candidates without the assistance of machinery.
- However the use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that procedure.

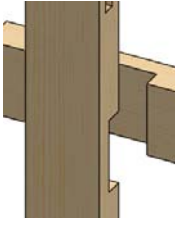
	<b>(i)</b>	<b>OVERALL ASSEMBLY</b>	<b>MARK</b>
	a.	Overall quality of assembled artefact	<b>10</b>
	b.	Design and applied shaping to edges <ul style="list-style-type: none"> <li>• design <i>3 marks</i></li> <li>• shaping <i>3 marks</i></li> </ul>	<b>6</b>
	<b>Total</b>		<b>16</b>

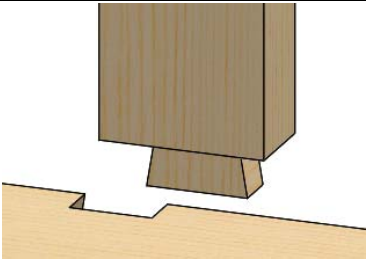
	<b>(ii)</b>	<b>MARKING OUT</b>	<b>Marks</b>
	a.	Bare Faced Mortice and Tenon <ul style="list-style-type: none"> <li>• Mortice <i>3 marks</i></li> <li>• Tenon <i>3 marks</i></li> </ul>	<b>6</b>
	b.	Top Bridle Joint <ul style="list-style-type: none"> <li>• Trench <i>2 x 2 marks</i></li> <li>• Bridle - vertical piece <i>2 marks</i></li> </ul>	<b>6</b>
	c.	Cross Halving Joint <ul style="list-style-type: none"> <li>• Trench - horizontal piece <i>2 marks</i></li> <li>• Trench - vertical piece <i>2 marks</i></li> </ul>	<b>4</b>
	d.	Dovetail <ul style="list-style-type: none"> <li>• Tail <i>3 marks</i></li> <li>• Trench <i>3 marks</i></li> </ul>	<b>6</b>
	e.	Box Dovetail <ul style="list-style-type: none"> <li>• Tails <i>2 x 2 marks</i></li> <li>• Pins <i>2 x 2 marks</i></li> </ul>	<b>8</b>
f.	Mortice and Tenon <ul style="list-style-type: none"> <li>• Mortice <i>2 marks</i></li> <li>• Tenon <i>2 marks</i></li> </ul>	<b>4</b>	

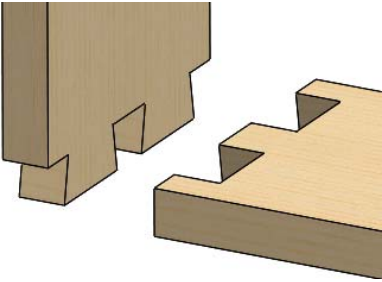
	g.	<b>Bridle Joint</b> <ul style="list-style-type: none"> <li>Trenches <i>2 × 2 marks</i></li> <li>Bridle <i>2 marks</i></li> </ul>	<b>6</b>
	h.	<b>Slopes and Curve</b> <ul style="list-style-type: none"> <li>Slopes <i>6 × 1 mark</i></li> <li>Curve <i>2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>48</b>

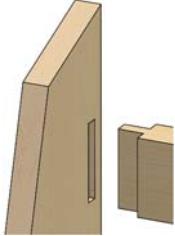
<b>Bare Faced Mortice and Tenon</b>	<b>(iii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortice <i>3 marks</i>	<b>3</b>
	b.	Tenon <i>6 marks</i>	<b>6</b>
	<b>Total</b>		<b>9</b>

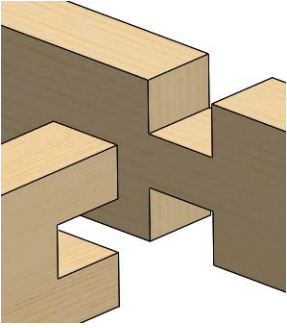
<b>Top Bridle Joint</b>	<b>(iv)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>Sawing across the grain <i>4 x1 mark</i></li> <li>Paring to trenches to depth <i>2 x 2 mark</i></li> </ul>	<b>8</b>
	b.	<b>Bridle</b> <ul style="list-style-type: none"> <li>Sawing with the grain <i>2 × 1 mark</i></li> <li>Paring bridle <i>2 marks</i></li> </ul>	<b>4</b>
	<b>Total</b>		<b>12</b>

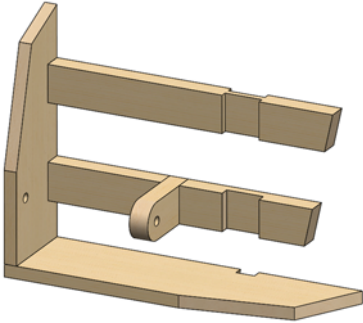
<b>Cross Halving Joint</b>	<b>(v)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	<b>Trenches</b> <ul style="list-style-type: none"> <li>sawing across the grain <i>4 × 1 mark</i></li> <li>paring trenches <i>2 x 2 marks</i></li> </ul>	<b>8</b>
	<b>Total</b>		<b>8</b>

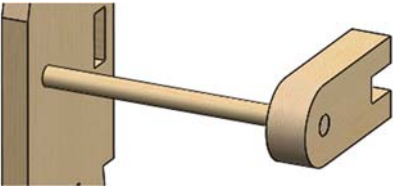
<b>Dovetail Halving</b>	<b>(vi)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tail – vertical piece <ul style="list-style-type: none"> <li>• saw of dovetail <span style="float: right;"><i>4 x 1 mark</i></span></li> <li>• Paring dovetail <span style="float: right;"><i>2 x 1 mark</i></span></li> </ul>	<b>6</b>
	b.	Dovetail trench <ul style="list-style-type: none"> <li>• sawing across the grain <span style="float: right;"><i>2 x 1 mark</i></span></li> <li>• paring trench <span style="float: right;"><i>2 marks</i></span></li> </ul>	<b>4</b>
	<b>Total</b>		<b>10</b>

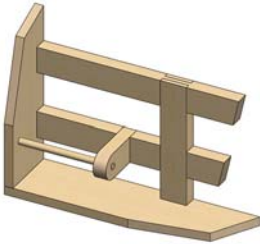
<b>Box Dovetail</b>	<b>(vii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Tails <span style="float: right;"><i>2 x 4 marks</i></span>	<b>8</b>
	b.	Pins <ul style="list-style-type: none"> <li>• sawing with the grain <span style="float: right;"><i>4 x 1 mark</i></span></li> <li>• sawing/paring across the grain <span style="float: right;"><i>2 x 2 marks</i></span></li> </ul>	<b>8</b>
	<b>Total</b>		<b>16</b>

<b>Mortise and Tenon Joint</b>	<b>(viii)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Mortise <span style="float: right;"><i>3 marks</i></span>	<b>3</b>
	b.	Tenon <span style="float: right;"><i>4 marks</i></span>	<b>4</b>
	<b>Total</b>		<b>7</b>

<b>Bridle Joint</b>	<b>(ix)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Trenches <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	b.	Bridle <ul style="list-style-type: none"> <li>• Vertical sawing <span style="float: right;"><i>2 × 1 mark</i></span></li> <li>• Paring bridle <span style="float: right;"><i>2 marks</i></span></li> </ul>	<b>4</b>
	<b>Total</b>		<b>8</b>

<b>Shaping</b>	<b>(x)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Short slopes <span style="float: right;"><i>2 × 1 mark</i></span>	<b>2</b>
	b.	Long slopes <span style="float: right;"><i>4 × 2 marks</i></span>	<b>8</b>
	c.	Curve <span style="float: right;"><i>2 marks</i></span>	<b>2</b>
	<b>Total</b>		<b>12</b>

<b>Drilling</b>	<b>(xi)</b>	<b>PROCESSING</b>	<b>Marks</b>
	a.	Dowel located and fitted correctly <span style="float: right;"><i>2 × 2 marks</i></span>	<b>4</b>
	<b>Total</b>		<b>4</b>

	<b>OVERALL COMPLETION OF PIECE</b>		<b>Marks</b>
	<b>Total Marks</b>		<b>150</b>



**Leaving Certificate Examination**

***Construction Studies***

*School assessment of Candidates' Practical Coursework*

Name of Candidate: .....

Examination Number:

Practical Craft

Building Science

**Type of Project:**

Written/Drawn with Scale model

Composite

<b><i>Marking Scheme</i></b>		<b>Maximum Marks</b>	<b>Marks Awarded</b>
<b>A</b>	<b>Planning of Project</b> <ul style="list-style-type: none"> <li>• Ability to design an appropriate plan of procedure</li> <li>• Evidence of research</li> <li>• Preparation of working drawings/use of models as graphic aids</li> </ul>		
	<b>Subtotal</b>	<b>30</b>	
<b>B</b>	<b>Report Writing</b> <ul style="list-style-type: none"> <li>• Design folio detailing planning, execution and evaluation of project</li> <li>• Critical appraisal of project for quality, function and finish</li> <li>• Conclusions from practical experience of project work</li> </ul>		
	<b>Subtotal</b>	<b>30</b>	
<b>C</b>	<b>Manipulative Skills</b> <ul style="list-style-type: none"> <li>• Skills in preparation and finishing of materials</li> <li>• Safe use of tools and machines - Hand/Power/CNC</li> <li>• Skills in assembly of materials</li> </ul>		
	<b>Subtotal</b>	<b>30</b>	
<b>D</b>	<b>Presentation of Project</b> <ul style="list-style-type: none"> <li>• Task completed to acceptable standard</li> <li>• Appropriate use of materials</li> <li>• Satisfactory knowledge of construction technology</li> </ul>		
	<b>Subtotal</b>	<b>30</b>	
<b>E</b>	<b>Experiments</b> <ul style="list-style-type: none"> <li>• Evidence of ability to plan and carry out <b>three</b> experiments</li> </ul> <i>Experiments should be related to the project work or selected from the suggested experiments outlined in the syllabus for Construction Studies.</i>	Experiment 1	
		Experiment 2	
		Experiment 3	
		<b>Subtotal</b>	<b>30</b>
<b>Total:</b>		<b>150</b>	

Signature of Teacher: .....

Date: .....

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