



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

**Leaving Certificate 2025**

**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 Examination, 2025*



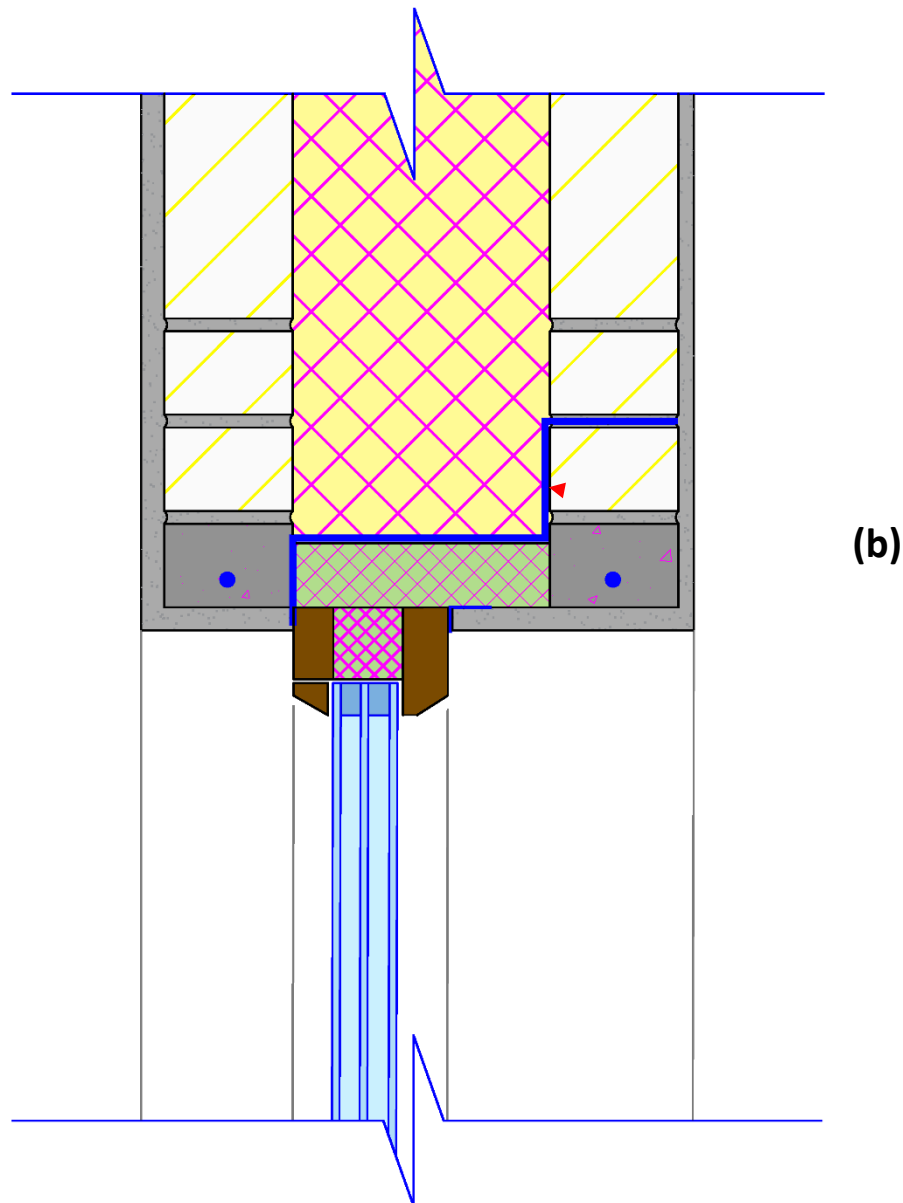
# **Construction Studies**

## **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 external wall and window of a dwelling house.



### 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
- 100 mm × 75 mm concrete lintel
- Stepped DPC
- Thermally broken window frame
- Triple glazing
- Airtightness tape

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

(b) Design detailing that prevents the penetration of rainwater at the window head.

Stepped DPC.



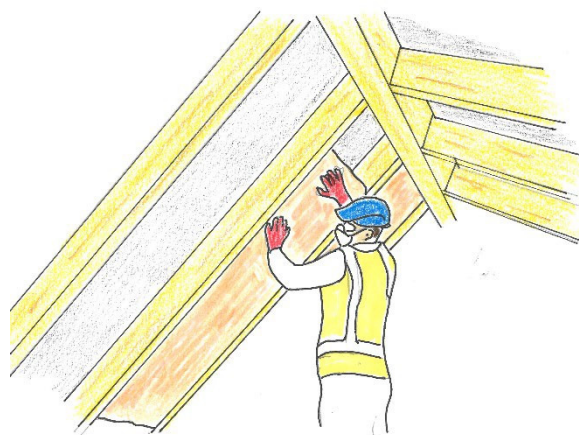
## Question 2

**(a) Two advantages of highly insulating the sloped ceiling of the living area.**

- Insulation will reduce heat loss in the house making it more energy efficient.
- To lower energy bills in the house
- Reduces your carbon footprint
- To increase comfort levels in the house
- To reduce further the energy usage of the home and in turn reduce carbon emissions
- Roof insulation can help reduce noise from outside
- Insulation can help reduce the amount of condensation that forms in the roof.

**(b) One suitable method of highly insulating the sloped ceiling**

- Cut the insulation material to required width so it can fit between the rafters
- Ensure adequate ventilation space is allowed between the breather membrane and insulation
- Insulating materials – phenolic foam, wood fibre, sheep's wool, EPS insulation
- Cover the insulated rafters with an airtight membrane
- Fix plasterboard/insulated plasterboard to the rafters.
- Plasterboard skim coated with plaster or taped and filled to provide a finish.



*Alternative method*

- Fix a ventilation card/spacer between the rafters.
- Spray foam insulation to the underside of the ventilation card
- When insulation is set, trim flush with the rafters
- Fix the plasterboard sheet to the rafters and skim over.

**Type of insulation**

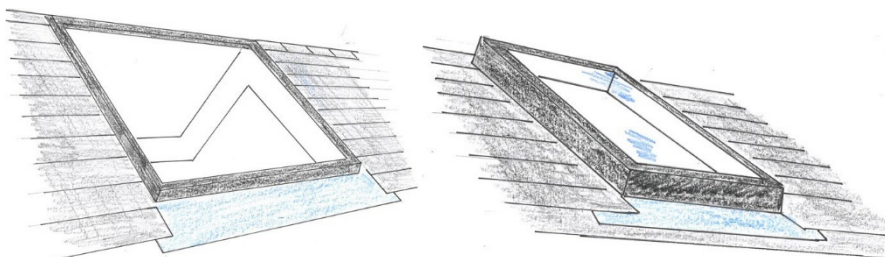
- Expanded polystyrene EPS
- Phenolic
- Polyisocyanurate (PIR)
- Extruded Polystyrene (XPS)

**Thickness of insulation**

- 200 mm insulation thickness minimum.

**(c) One feature which could be included in the sloped ceiling to allow additional natural light into the living area.**

- Skylight
- Dormer window
- Ridge roof-light
- Sun tunnel

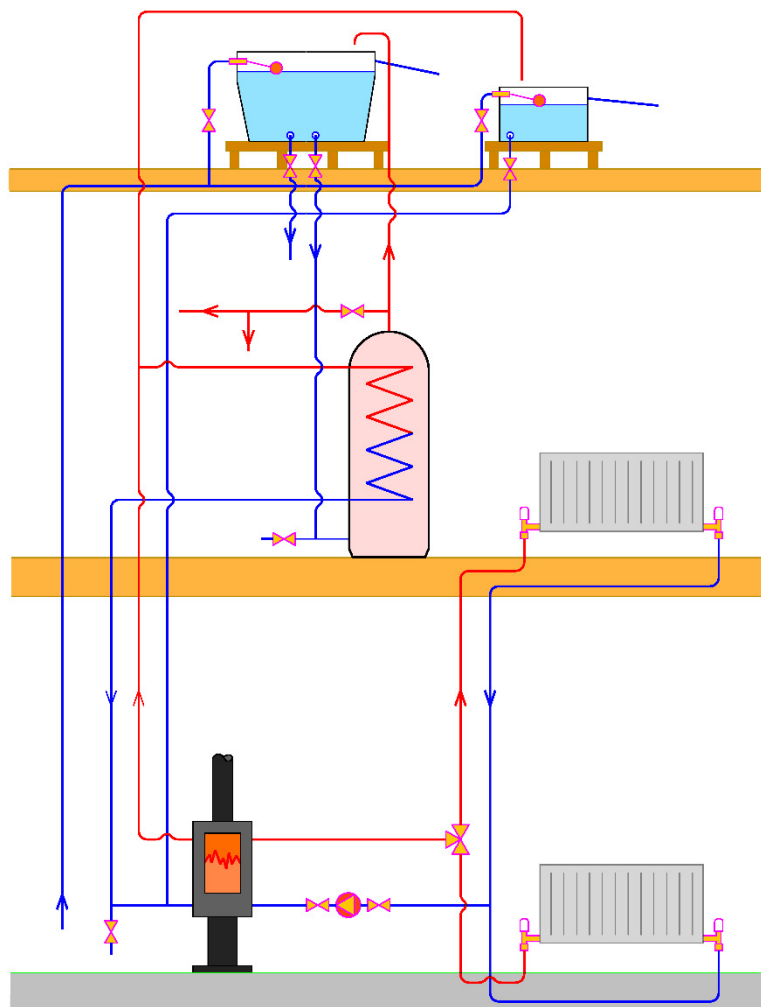


### Question 3

- (a) **Pipework necessary to supply hot water from the stove to the radiators and to heat the water in the cylinder.**

**Typical details:**

- 15mm rising main
- Stop valve
- Insulated storage tank
- Expansion tank / vessel
- Stove
- Cold feed to stove
- 250 l cylinder
- Ø22 mm primary flow to cylinder
- Ø22 mm primary return to stove
- Hot feed from cylinder
- Ø22 mm expansion pipe
- Radiators
- Ø22 mm flow to radiators
- Ø22 mm return from radiators
- Pump and valves.

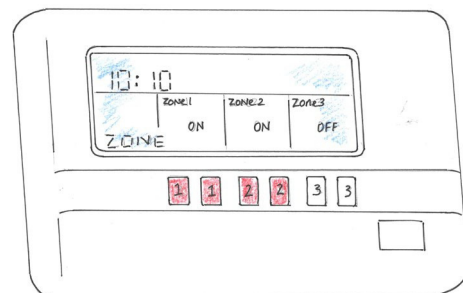


*N.B. Any alternative detailing which complies with current Building Regulations is acceptable.*

- (b) **One advantage of installing a zoned heating system so the radiators and hot water can be heated separately.**

- It is more energy efficient to only heat the zone you need
- Reduced cost to homeowner
- Avoids unnecessary energy use
- More user control over your heating system
- Only heating the water may lead to less wear and tear on the heating system
- A zoned heating system is a more modern system which may increase the value of the home.

*Any other suitable reason will be accepted*

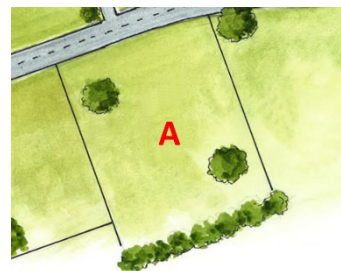


## Question 4

(a) Select your preferred site A or B and give two reasons for your choice.

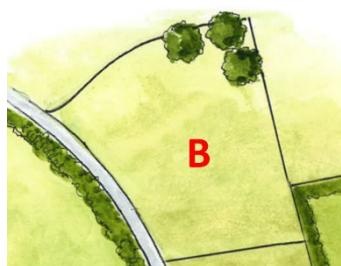
### Site A – Considerations

- Allows for a south facing façade to the house for maximum solar gain
- Has direct access to the main road for services
- Close to existing houses for access to services
- Existing hedgerow to one side of the site for shelter
- Well-proportioned size and shape of site for home and garden.



### Site B – Considerations

- Allows for a south facing façade for maximum solar gain
- Reduced risk when entering and exiting site as it is accessed from a secondary road
- Close to existing houses for access to services
- Off the main road for greater privacy
- Less noise and air pollution as the site is away from the main road
- Site is on the same side as other buildings for services, security



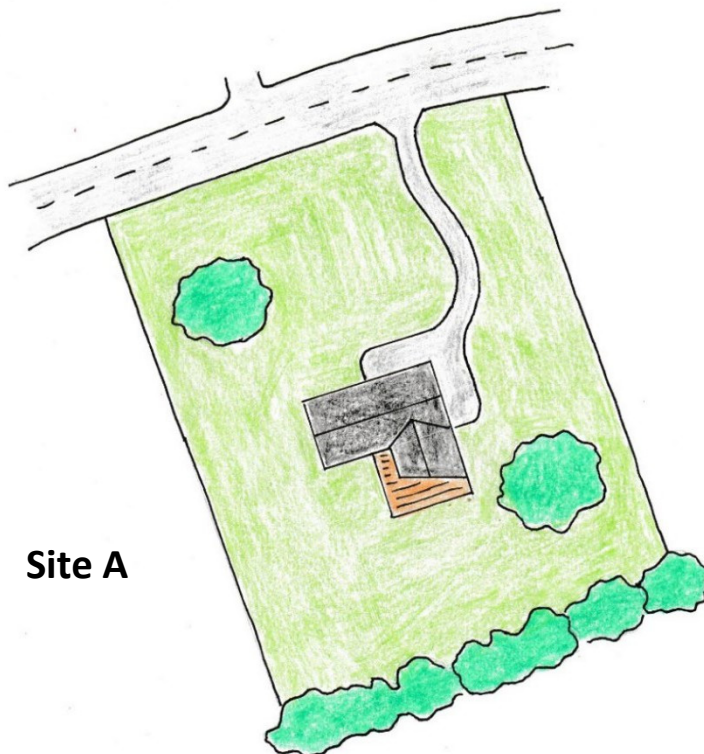
*Any other valid reason will be accepted.*

(b) Draw a large freehand sketch of your chosen site. On your sketch include your preferred:

- house position
- entrance to the site
- driveway to the house.

### House position

- House positioned to allow south facing façade.
- House position leaves room for a large front and rear garden
- Existing trees utilised for shelter barrier
- Positioned to allow maximum solar gain
- House positioned for privacy
- House set back from the road to minimise visual impact



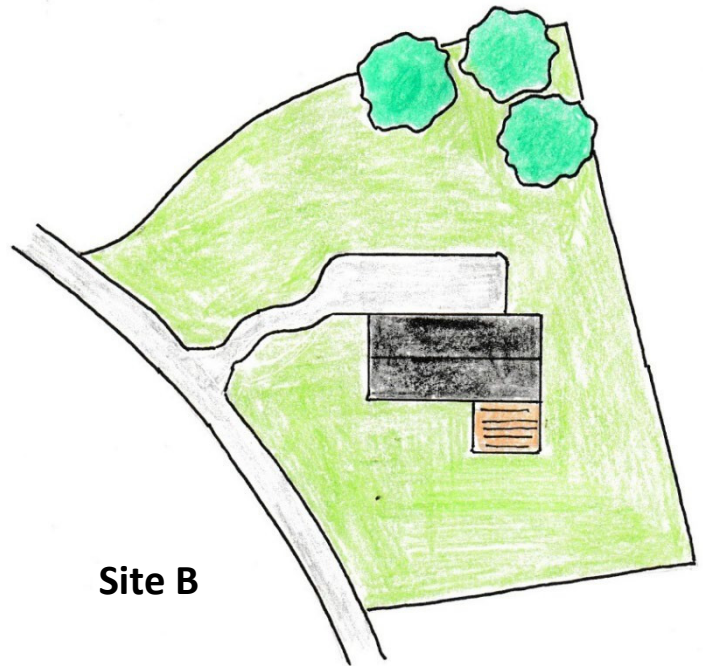
Site A

**Entrance to the site**

- Entrance off secondary road for safe entry and exit
- Position entry to minimise disturbance to existing trees
- Entrance positioned to give clear line of sight in both directions
- Sidewalls splayed at 45° for clear vision when exiting

**Driveway to the house**

- Shorter driveways save on materials and cost
- Driveway gently curved to minimise visual impact
- Driveway positioned to the north of house to limit obstruction of views
- Driveway positioned to allow parking to the rear.

**(c) One advantage and one disadvantage of building a house in the countryside.****Advantages**

- The countryside is generally much quieter than urban areas, with less noise pollution
- Living in the countryside surrounded by nature can improve mental health
- Sites in the countryside can be more affordable than in towns and cities
- The countryside can provide beautiful views of the landscape
- The air quality in rural areas is usually better due to less industrial activity and fewer vehicles
- Rural areas often have lower housing costs compared to towns
- You can get more space for your money, which may allow you to build a larger home or have a bigger garden.
- The countryside is less densely populated allowing for greater privacy

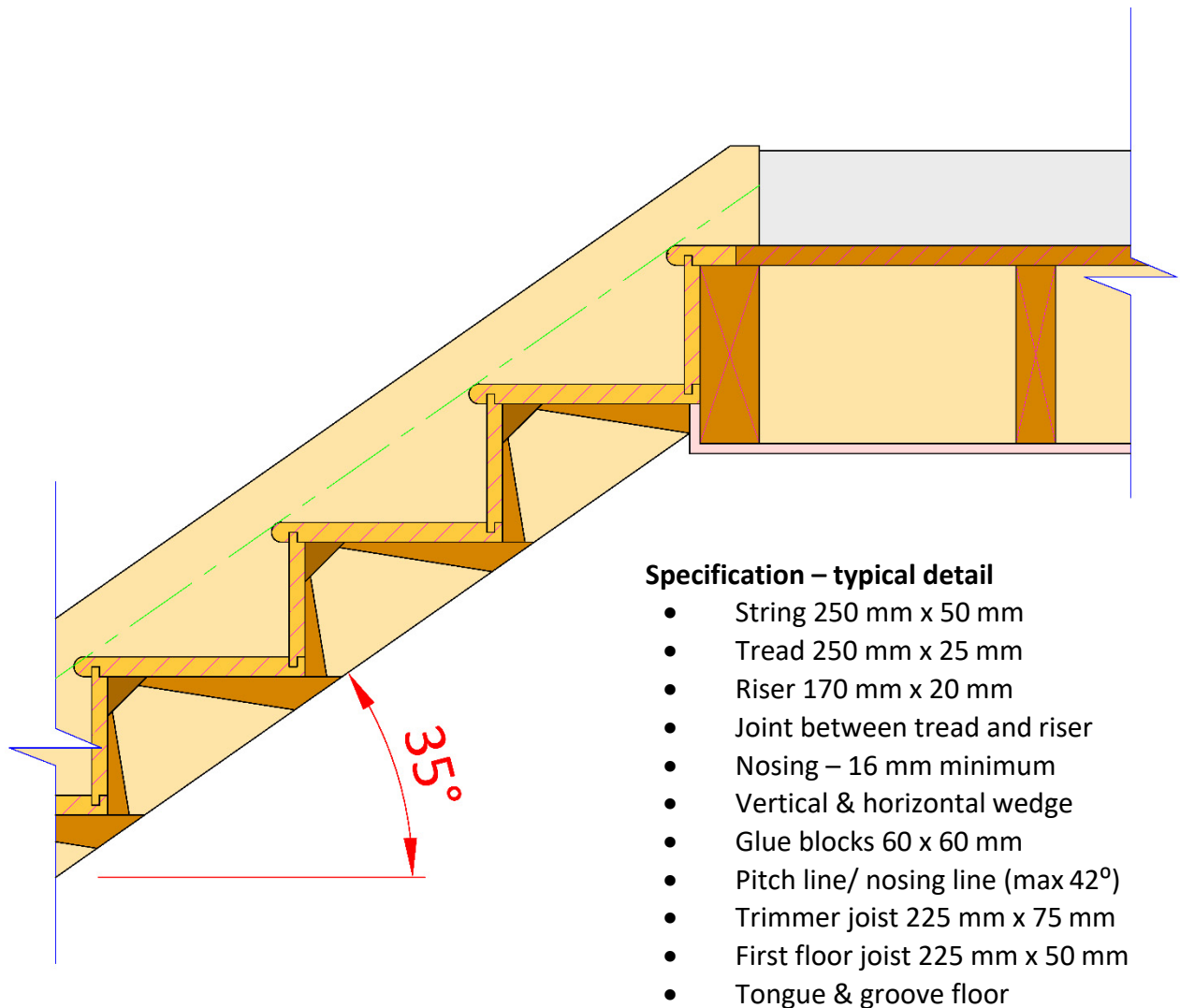
**Disadvantages**

- Amenities and services like healthcare, schools, and shopping may be far away
- More dependence on a car in the countryside which increases your carbon footprint
- The infrastructure in rural areas can be less developed, which means limited public transportation
- Internet or phone connections can often be more restricted
- For some, living in the countryside can be quite isolated compared to a town

*Any other suitable detail will be accepted.*

## Question 5

(a) Vertical section through a closed string wooden stairs and first floor landing.

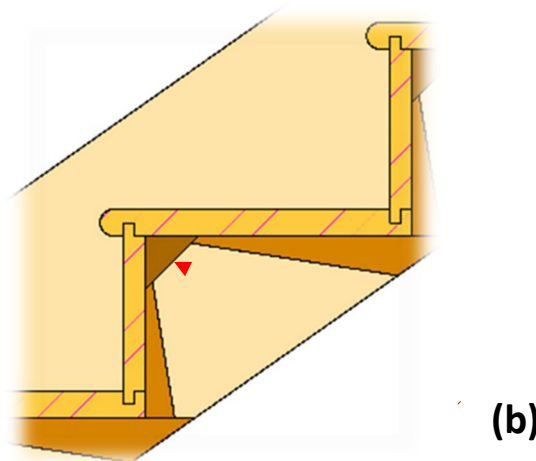


*Note: Any alternative detailing which complies with current Building Regulations is acceptable*

(b) Design detail which will ensure that the stairs will not creak when in use.

Glue blocks.

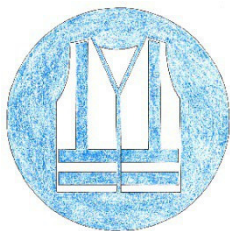
*Any other suitable detail will be accepted.*





## Question 6

- (a) Show the safety sign for each of the following personal protective equipment (PPE) items. Give one specific reason why each.



### 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.



### Safety boots

Protects workers from heavy materials or objects being dropped and injuring their foot. Sole to protect from sharp objects



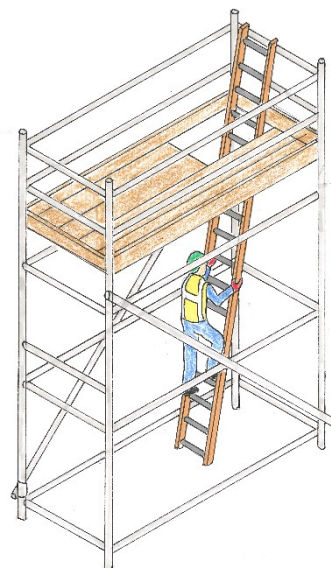
### Ear defenders

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

*Any other suitable specific precaution will be accepted.*

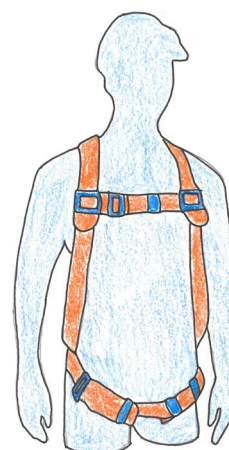
- (b) Describe two potential risks to construction workers when working at height on a construction site.

- Workers may slip and fall from a height when on scaffolding or rooftops
- A ladder or platform could give way causing a worker to fall
- Using power tools can be more challenging at a height leading to an injury
- Tools or materials can fall from height and strike a construction worker below
- Heavy rain or gusts of wind are often more severe at a height and could lead to a worker falling



- (c) Using notes and freehand sketches, describe one safety measure that should be in place to ensure construction workers can safely access a roof when installing solar panels.

- Safe and stable scaffolding and ladders should be used to provide access to the roof
- installing guardrails around the perimeter can prevent workers from accidentally falling off the roof
- A safety harness which is attached to secure anchor points can be worn by workers
- Ladders should be placed at the correct angle and extend adequately to provide a secure handhold when workers step onto the roof
- A qualified construction worker should inspect the roof structure to ensure that it can safely support the weight of the workers and equipment
- Proper non-slip boots should be worn to reduce the risk of slipping on the roof's surface



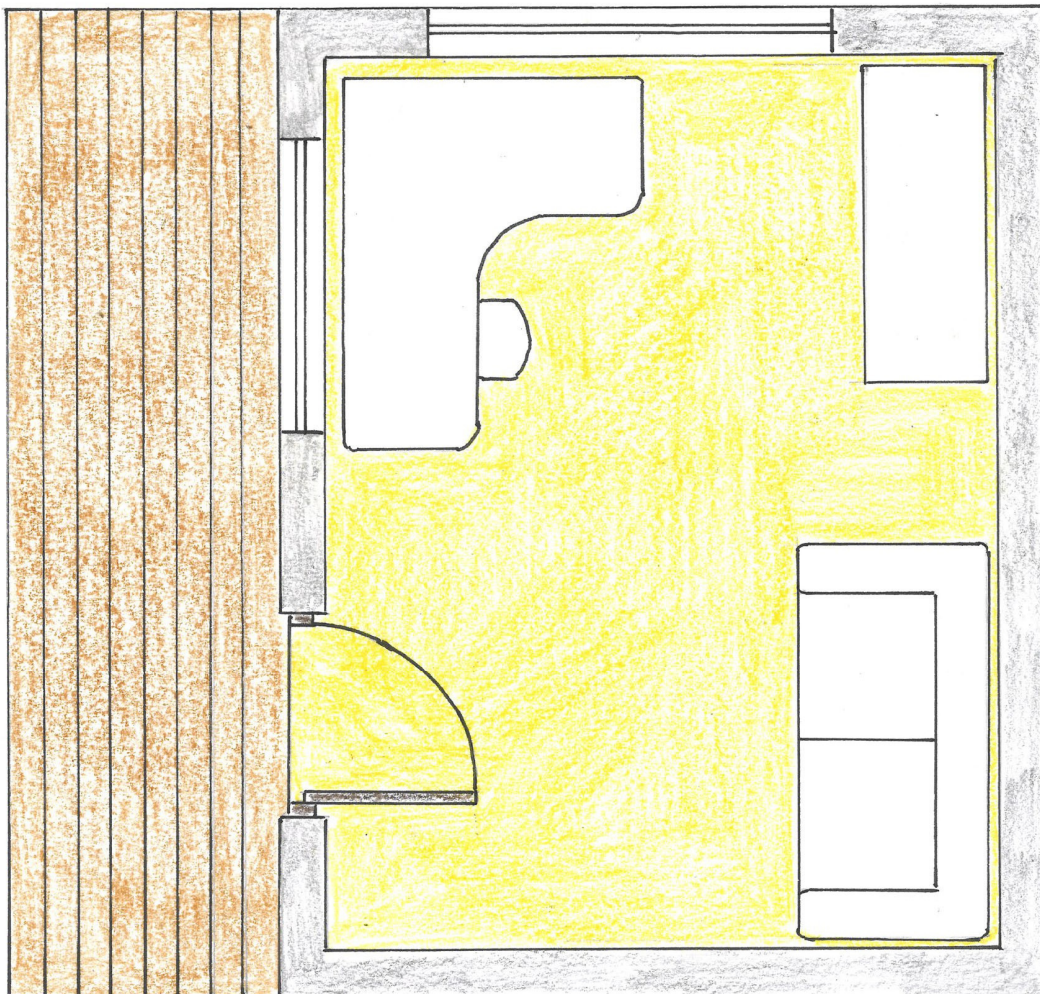
## Question 7

(a) Discuss two advantages of using timber frame for the construction of the garden office room.

- Timber frame can be quicker to construct than traditional concrete block construction
- Timber is a renewable material
- It is an environmentally friendly option with a low embodied energy
- Timber is generally less expensive than other construction materials like steel or concrete
- The office can be prefabricated in a factory leading to less time on site
- The light weight of timber frame construction reduces the need for large concrete foundations
- Timber can give an attractive aesthetic to the office

(b) Draw a large freehand sketch of the given design and show your preferred location for each of the following in the garden office:

- corner desk
- two windows
- bookcase unit
- seating area.



**Give one reason for selecting each location.**

**corner desk**

- Located close to a window for a view
- Located in the brightest area of the office close to a window
- Located away from the door for ease of entry

**two windows**

- Located close to the desk to provide a view while working
- Located at the front to see people as they approach
- Located on two different walls to provide dual aspect

**bookcase unit**

- Located on the back wall to allow adequate space for the desk
- Located near the seating area for convenience when reading
- Located away from the windows to not obstruct the light

**seating area.**

- Located away from the desk to create a different zone within the office
- Located close to the door so as not to disturb anyone working at the desk
- Located to allow the brightest area to be free for the desk.

*Or any other suitable locations and reason will be accepted*

**(c) Discuss one advantage and one disadvantage of constructing a garden office separate to the home.**

**Advantage**

- Creates a clear boundary between work and home life
- Easier to concentrate when away from household noise and interruptions.
- A garden office can increase the value of your home
- Lessens the impact on the household
- The office does not take up space within the house

**Disadvantage**

- It can be expensive to create the separate office and provide required services such as electricity, internet
- May also require planning permission depending on size and location
- Can be cold and uncomfortable to work in if not constructed to a high standard
- Reduces the size of your garden
- Will require on-going maintenance to keep it in good condition

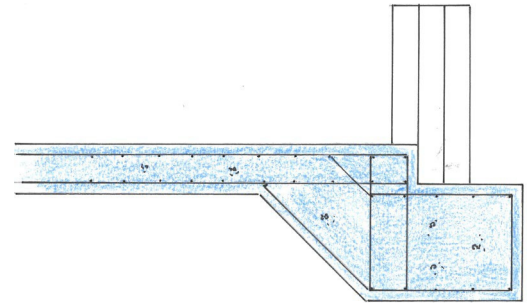
*Any other valid reason will be accepted.*



## Question 8

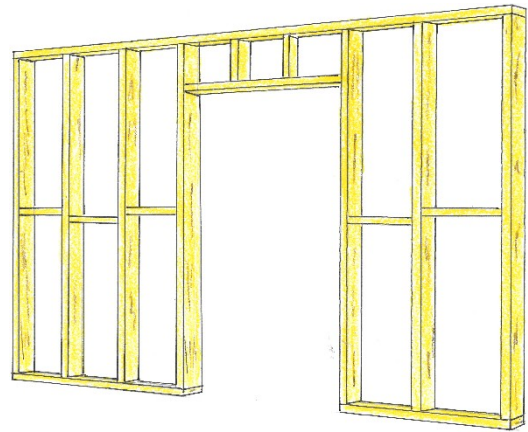
### Raft foundation

- A raft foundation is a type of foundation that consists of a large, continuous concrete slab that supports the entire structure
- It "floats" like a raft on the ground, hence the name
- Used in residential and commercial buildings and ideal for soils of low bearing capacity
- Spreads the weight across the entire footprint of the building, reducing pressure on the soil
- Additional steel and concrete required compared to a traditional strip foundation.



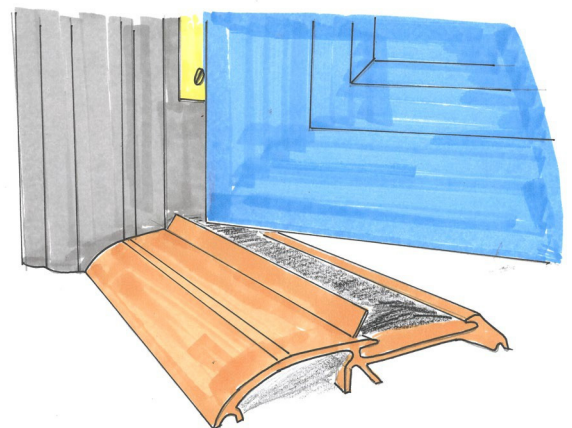
### Stud wall

- A stud wall is a type of internal wall construction made using a frame of vertical wooden or metal uprights called studs, that are covered with plasterboard on either side
- Stud walls are lightweight and faster to construct than block walls
- They can be both load bearing and non-load bearing
- Stud walls easily allow services such as electric and plumbing to be accommodated within them
- Stud walls generally do not share the same soundproofing or bearing capacity as a concrete block wall.



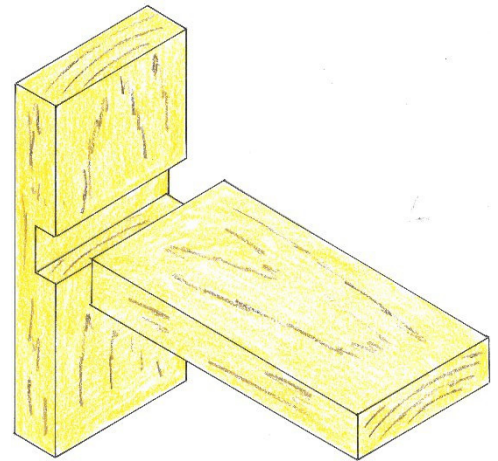
### Door threshold

- A door threshold is the strip, usually made of wood, metal, or plastic, located at the bottom of a doorway, where the door closes
- The door threshold bridges the gap between two floor surfaces and helps seal the doorway
- On external doors, a good seal is essential at the door threshold for weatherproofing and to prevent drafts
- On internal doorways, thresholds can cover height differences between flooring types (e.g., carpet to tile)
- Door thresholds must adhere to specific building regulations to ensure they do not impede entry or cause a trip hazard to users.



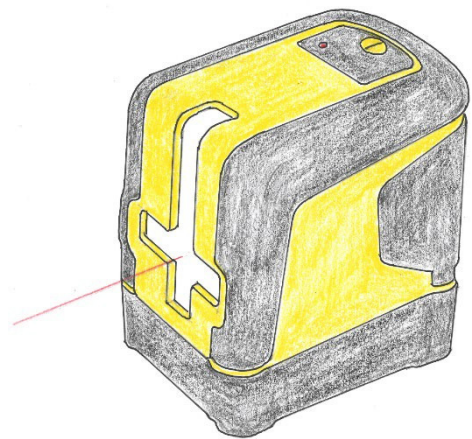
## Housing joint

- A housing joint is common woodworking joint with a medium gluing area
- A housing joint consists of one piece of timber with a groove or slot cut across its width, and another piece which fits snugly into that groove
- It's commonly used for making shelves, cabinets, and bookcases
- The joint can be a 'through' housing joint or a 'stopped' housing joint
- With a stopped housing joint, the groove doesn't go all the way through the front edge, so the joint is hidden from view
- With a through housing joint the groove runs fully across the board, which is quicker to make, but visible at both ends.



## Laser level

- A laser level is a tool that projects a laser beam to create a straight and level reference line
- It's widely used in construction, carpentry, tiling, and DIY to ensure precision work
- The laser level often has a vertical and/or horizontal laser line
- A Rotary Laser Level which projects a 360-degree rotating beam, may be used in large-scale or outdoor work
- Much more accurate than traditional spirit levels and can be mounted to tripods or clamps for steady use.



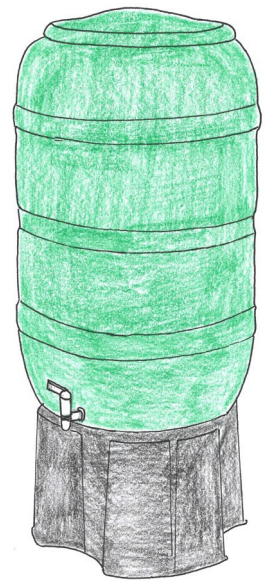
## Baluster

- A baluster is a short vertical post or pillar, often decorative, that supports the handrail of a staircase
- A series of balusters together is called a balustrade
- Balusters are an important safety element of the stairs and prevent people, especially children, from falling off the stairs
- Balusters are also found on balconies and terrace areas
- Balusters may be made from wood, metal, glass or concrete and come in various designs.

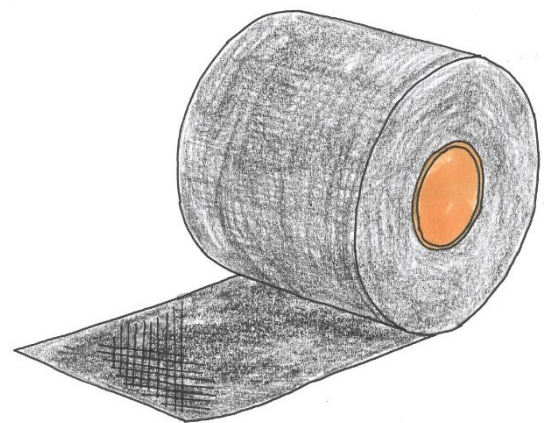


**Rainwater butt**

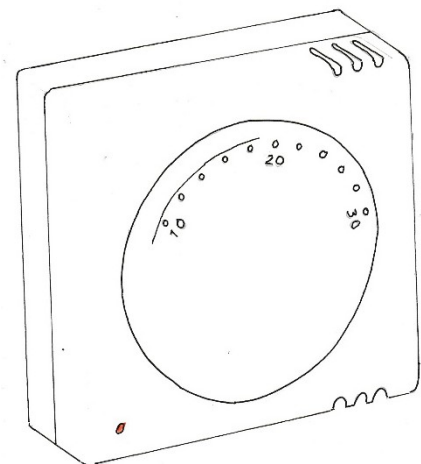
- A rainwater butt is a container used to collect and store rainwater that runs off rooftops via gutters and downpipes
- It's a simple and eco-friendly way to reuse water around your home and garden
- Water is a valuable natural resource, and a rainwater butt reduces reliance on treated tap water
- The water collected may be used for watering plants, flowers, vegetables, lawns or even washing your car
- Lowers your water use, especially if you're on a water meter.

**Damp-proof course**

- A Damp Proof Course (DPC) is a protective barrier installed in buildings to prevent moisture from rising through walls and floors by capillary action
- A DPC reduces the risk of mold, structural decay, and health hazards caused by damp conditions
- DPC can be made from various materials such as plastic (polythene), bitumen felt, metal sheets (lead/copper), or slate
- DPC is installed during construction, horizontally between courses of block/bricks, typically 150mm above ground level
- By the DPC preventing ground moisture from seeping into a building's walls or floors, it helps protect interior finishes, like plaster and paint, from damp damage
- DPC is also used around windows and door openings.

**Room thermostat**

- A room thermostat is a device used to control the temperature of a room
- A room thermostat works by regulating a heating or cooling system like a boiler, central heating, or air conditioner, based on the temperature set
- If the temperature drops below a set point, the thermostat signals the heating system to turn on. If it rises above the set point, the system is turned off
- It helps maintain a comfortable room temperature in an efficient manner.
- Manual room thermostats have a dial-based control or digital screen which can be adjusted manually to increase or decrease the temperature.
- Smart room thermostats connect to Wi-Fi and can be controlled via a smartphone.





## Question 9

**(a) Two reasons why the homeowners wish to create an outdoor dining/living space.**

- Creates an additional usable living space without much cost
- Provides a space for entertaining, dining, relaxing, especially in good weather
- Creates a natural space for BBQs and parties
- Increases the value of the home
- Being outdoors helps reduce stress, improve mood, and support better mental health
- Makes it easier to enjoy fresh air, greenery, and outdoor activities.

*Any other valid reason*

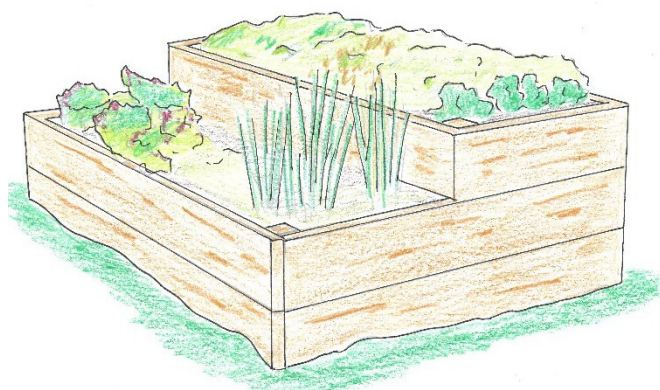
**(b) Two modifications that could be made at the rear of the house that would allow for access to the garden from the house and an outdoor dining/living space.**

- Replace windows with a large glazed door
- Install a large sliding door
- Install a bifold door
- Patio area along back wall
- Some grass area changed to decking or slabs
- Create a BBQ area



**(c) Two other possible family uses of a large garden**

- Provide a safe play area for kids
- Space for slides, trampolines etc
- A garden can allow you grow plants and flowers
- Area to grow vegetables and herbs
- You can get closer to nature by using bird feeders
- Space for a garden shed or additional storage
- A garden is ideal for a family pet.



*Any other valid reason*

**Question 1.**

| <b>Vertical section through the external wall and window head.</b>                           |                                                          |                 |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|
| <b>Details - typical sizes</b>                                                               |                                                          | <b>Marks</b>    |
| <b>Part (a)</b>                                                                              |                                                          |                 |
| External render                                                                              |                                                          | <b>5</b>        |
| Concrete block outer leaf                                                                    |                                                          |                 |
| Full fill insulated cavity with wall tie                                                     |                                                          | <b>5</b>        |
| Concrete block inner leaf                                                                    |                                                          | <b>5</b>        |
| Internal plaster                                                                             |                                                          | <b>5</b>        |
| Cavity closer                                                                                |                                                          | <b>5</b>        |
| Stepped DPC                                                                                  |                                                          | <b>5</b>        |
| Concrete lintels                                                                             |                                                          | <b>5</b>        |
| Thermally broken window frame                                                                |                                                          | <b>5</b>        |
| Triple glazing                                                                               |                                                          |                 |
| Airtightness                                                                                 |                                                          |                 |
| <b>Any 7 x 5 marks</b>                                                                       | <b>Sub-total</b>                                         | <b>35</b>       |
| Any 3 typical dimensions                                                                     |                                                          | <b>3</b>        |
| <b>Draughting, accuracy, and scale</b>                                                       | <b>(excellent, good, fair)</b><br><b>8      6      4</b> | <b>8</b>        |
|                                                                                              | <b>Sub-total</b>                                         | <b>11</b>       |
| <b>Part (b)</b>                                                                              |                                                          |                 |
| Show the typical design detailing that prevents the penetration of water at the window head. |                                                          |                 |
| Stepped DPC clearly identified                                                               |                                                          | <b>4</b>        |
|                                                                                              | <b>Sub-total</b>                                         | <b>4</b>        |
|                                                                                              |                                                          | <b>50 marks</b> |



**Question 2.**

| <b>Energy upgrades</b>                                                                                                 |                 |
|------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Details</b>                                                                                                         | <b>Marks</b>    |
| <b>Part (a)</b>                                                                                                        |                 |
| Discuss <b>two</b> advantages of highly insulating the sloped ceiling of the room.                                     |                 |
| Advantage 1                                                                                                            | <b>6</b>        |
| Advantage 2                                                                                                            | <b>6</b>        |
| <b>Sub-total</b>                                                                                                       | <b>12</b>       |
| <b>Part (b)</b>                                                                                                        |                 |
| Method of insulating the sloped ceiling.                                                                               |                 |
| Method of insulating the sloped ceiling      note & sketch      (8 + 8 marks)                                          | <b>16</b>       |
| Preferred insulation type for sloped ceiling                                                                           | <b>4</b>        |
| Thickness of insulation                                                                                                | <b>4</b>        |
| <b>Sub-total</b>                                                                                                       | <b>24</b>       |
| <b>Part (c)</b>                                                                                                        |                 |
| Suggest <b>one</b> feature which could be included in the sloped ceiling to allow more natural light into the kitchen. |                 |
| Note                                                                                                                   | <b>7</b>        |
| Sketch                                                                                                                 | <b>7</b>        |
| <b>Sub-total</b>                                                                                                       | <b>14</b>       |
| <b>Total</b>                                                                                                           | <b>50 marks</b> |

**Question 3.**

| <b>Wood pellet stove &amp; hot water supply</b>                                                                                  |                                                          |                 |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|
| <b>Details – typical sizes</b>                                                                                                   |                                                          | <b>Marks</b>    |
| <b>Part (a)</b><br>Pipework necessary to supply hot water from the stove to the radiators and to heat the water in the cylinder. |                                                          |                 |
| Draw given sketch                                                                                                                |                                                          | 5               |
| 15mm cold feed to stove                                                                                                          |                                                          |                 |
| 22 mm flow to radiators                                                                                                          |                                                          |                 |
| 22 mm return from radiators                                                                                                      |                                                          |                 |
| Radiators                                                                                                                        |                                                          |                 |
| Cold feed to cylinder                                                                                                            |                                                          |                 |
| 22 mm primary flow to cylinder                                                                                                   |                                                          |                 |
| 22 mm primary return from cylinder                                                                                               |                                                          |                 |
| 22 mm expansion pipe                                                                                                             |                                                          |                 |
| Expansion tank/ vessel                                                                                                           |                                                          |                 |
| Hot feed from cylinder                                                                                                           |                                                          |                 |
| 22 mm overflow pipe                                                                                                              |                                                          |                 |
| Pump and valves.                                                                                                                 |                                                          |                 |
| <b>Any 8 x 5 marks</b>                                                                                                           | <b>Sub-total</b>                                         | <b>40</b>       |
| <b>Quality of sketch</b>                                                                                                         | <b>(excellent, good, fair)</b><br><b>5      3      1</b> |                 |
|                                                                                                                                  | <b>Sub-total</b>                                         | <b>5</b>        |
| <b>Part (b)</b><br><b>One</b> advantage of zoning a heating system so the radiators and hot water can be heated separately.      |                                                          |                 |
| Advantage                                                                                                                        |                                                          | 5               |
|                                                                                                                                  | <b>Sub-total</b>                                         | <b>5</b>        |
| <b>Total</b>                                                                                                                     |                                                          | <b>50 marks</b> |

**Question 4.**

| <b>Site in the country</b>                                                     |                 |
|--------------------------------------------------------------------------------|-----------------|
| <b>Details</b>                                                                 | <b>Marks</b>    |
| <b>Part (a)</b>                                                                |                 |
| Select your preferred site A or B and give <b>two</b> reasons for your choice. |                 |
| Select site                                                                    | <b>2</b>        |
| Reason 1                                                                       | <b>6</b>        |
| Reason 2                                                                       | <b>6</b>        |
| <b>Sub-total</b>                                                               | <b>14</b>       |
| <b>Part (b)</b>                                                                |                 |
| Draw a large freehand sketch of your chosen site.                              |                 |
| Site outline                                                                   | <b>6</b>        |
| House position                                                                 | <b>6</b>        |
| Entrance to the site                                                           | <b>6</b>        |
| Driveway to the house                                                          | <b>6</b>        |
| <b>Sub-total</b>                                                               | <b>24</b>       |
| <b>Part (c)</b>                                                                |                 |
| One advantage and one disadvantage of building a house in the countryside.     |                 |
| Advantage                                                                      | <b>6</b>        |
| Disadvantage                                                                   | <b>6</b>        |
| <b>Sub-total</b>                                                               | <b>12</b>       |
| <b>Total</b>                                                                   | <b>50 marks</b> |

**Question 5.**

| <b>Closed string wooden stairs and first floor landing</b>                                              |                                                          |                 |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|
| <b>Details - typical sizes</b>                                                                          |                                                          | <b>Marks</b>    |
| <b>Part (a)</b>                                                                                         |                                                          |                 |
| Draw a vertical section through the centre of the top <b>three</b> steps of the stairs and the landing. |                                                          |                 |
| String 250 mm × 50 mm                                                                                   |                                                          | <b>5</b>        |
| Tread 250 mm × 25 mm                                                                                    |                                                          |                 |
| Riser 170 mm × 20 mm                                                                                    |                                                          |                 |
| Joint between tread and riser                                                                           |                                                          |                 |
| Nosing – 16 mm minimum                                                                                  |                                                          |                 |
| Vertical & horizontal wedge                                                                             |                                                          |                 |
| Glue blocks 60 mm × 60 mm                                                                               |                                                          |                 |
| Pitch line/ nosing line (max 42°)                                                                       |                                                          |                 |
| Trimmer joist 225 mm x 75 mm                                                                            |                                                          |                 |
| First floor joist 225 mm x 50 mm                                                                        |                                                          |                 |
| Tongue and groove floor                                                                                 |                                                          | <b>5</b>        |
| <b>Any 7 x 5 marks</b>                                                                                  | <b>Sub-total</b>                                         | <b>35</b>       |
| <b>Three typical dimensions</b>                                                                         | 3 x 1 mark                                               | <b>3</b>        |
| <b>Draughting, accuracy and scale</b>                                                                   | <i>(excellent, good, fair)</i><br><b>8      6      4</b> | <b>8</b>        |
|                                                                                                         | <b>Sub-total</b>                                         | <b>11</b>       |
| <b>Part (b)</b>                                                                                         |                                                          |                 |
| Design detail which will ensure that the stairs will not creak when in use.                             |                                                          |                 |
| Glue blocks                                                                                             |                                                          | <b>4</b>        |
|                                                                                                         | <b>Sub-total</b>                                         | <b>4</b>        |
|                                                                                                         | <b>Total</b>                                             | <b>50 marks</b> |

**Question 6.**

| <b>Site Safety</b>                                                                                                                                                  |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Details</b>                                                                                                                                                      | <b>Marks</b>    |
| <b>Part (a)</b><br>Show the safety sign for each of the following PPE and give one specific reason why it must be worn.                                             |                 |
| High-visibility vest sign and specific reason (5+3 marks)                                                                                                           | <b>8</b>        |
| Safety boots sign and specific reason (5+3 marks)                                                                                                                   | <b>8</b>        |
| Ear defenders sign and specific reason (5+3 marks)                                                                                                                  | <b>8</b>        |
| <b>Sub-total</b>                                                                                                                                                    | <b>24</b>       |
| <b>Part (b)</b><br>Describe <b>two</b> potential risks to construction workers when working at a height on a construction site.                                     |                 |
| Risk 1                                                                                                                                                              | <b>6</b>        |
| Risk 2                                                                                                                                                              | <b>6</b>        |
| <b>Sub-total</b>                                                                                                                                                    | <b>12</b>       |
| <b>Part (c)</b><br>Describe <b>one</b> safety measure that should be in place to ensure construction workers can safely access a roof when installing solar panels. |                 |
| Notes                                                                                                                                                               | <b>7</b>        |
| Sketch                                                                                                                                                              | <b>7</b>        |
| <b>Sub-total</b>                                                                                                                                                    | <b>14</b>       |
| <b>Total</b>                                                                                                                                                        | <b>50 marks</b> |



**Question 7.**

| <b>Office design</b>                                                                                                                    |                                                     |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------|
| <b>Details</b>                                                                                                                          |                                                     | <b>Marks</b>    |
| <b>Part (a)</b>                                                                                                                         |                                                     |                 |
| <b>Two</b> advantages of using timber-frame for the construction of the office room.                                                    |                                                     |                 |
| Advantage 1                                                                                                                             |                                                     | <b>5</b>        |
| Advantage 2                                                                                                                             |                                                     | <b>5</b>        |
| <b>Sub-total</b>                                                                                                                        |                                                     | <b>10</b>       |
| <b>Part (b)</b>                                                                                                                         |                                                     |                 |
| Show preferred location and a reason for each of the following;<br>• Corner desk    • two windows    • bookcase unit    • seating area. |                                                     |                 |
| Sketch                                                                                                                                  | ( <i>excellent, good, fair</i> )<br>8      6      4 | <b>8</b>        |
| Location and valid reason for corner desk                                                                                               | (3 + 2 marks)                                       | <b>5</b>        |
| Location and valid reason for two windows                                                                                               | (3 + 2 marks)                                       | <b>5</b>        |
| Location and valid reason for bookcase unit                                                                                             | (3 + 2 marks)                                       | <b>5</b>        |
| Location and valid reason for seating area                                                                                              | (3 + 2 marks)                                       | <b>5</b>        |
| <b>Sub-total</b>                                                                                                                        |                                                     | <b>28</b>       |
| <b>Part (c)</b>                                                                                                                         |                                                     |                 |
| Discuss <b>one</b> advantage and <b>one</b> disadvantage of constructing an office room separate from the home.                         |                                                     |                 |
| Advantage                                                                                                                               |                                                     | <b>6</b>        |
| Disadvantage                                                                                                                            |                                                     | <b>6</b>        |
| <b>Sub-total</b>                                                                                                                        |                                                     | <b>12</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>Bungalow design</b>                                                                                                                                            |                       |                       |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------|
| <b>Details</b>                                                                                                                                                    |                       |                       | <b>Marks</b>    |
| <b>Part (a)</b>                                                                                                                                                   |                       |                       |                 |
| Discuss <b>two</b> reasons why the homeowners wish to create an outdoor dining/living space.                                                                      |                       |                       |                 |
| Reason 1                                                                                                                                                          |                       |                       | <b>6</b>        |
| Reason 2                                                                                                                                                          |                       |                       | <b>6</b>        |
| <b>Sub-total</b>                                                                                                                                                  |                       |                       | <b>12</b>       |
| <b>Part (b)</b>                                                                                                                                                   |                       |                       |                 |
| <b>Two</b> modifications that could be made at the rear of the house that would allow for access to the garden from the house and an outdoor dining/living space. |                       |                       |                 |
| Modification 1                                                                                                                                                    | <i>sketch + notes</i> | <i>(8 + 5 marks )</i> | <b>13</b>       |
| Modification 2                                                                                                                                                    | <i>sketch + notes</i> | <i>(8 + 5 marks )</i> | <b>13</b>       |
| <b>Sub-total</b>                                                                                                                                                  |                       |                       | <b>26</b>       |
| <b>Part (c)</b>                                                                                                                                                   |                       |                       |                 |
| Discuss <b>two</b> other possible family uses of a large garden.                                                                                                  |                       |                       |                 |
| Suggested use 1                                                                                                                                                   |                       |                       | <b>6</b>        |
| Suggested use 2                                                                                                                                                   |                       |                       | <b>6</b>        |
| <b>Sub-total</b>                                                                                                                                                  |                       |                       | <b>12</b>       |
| <b>Total</b>                                                                                                                                                      |                       |                       | <b>50 marks</b> |



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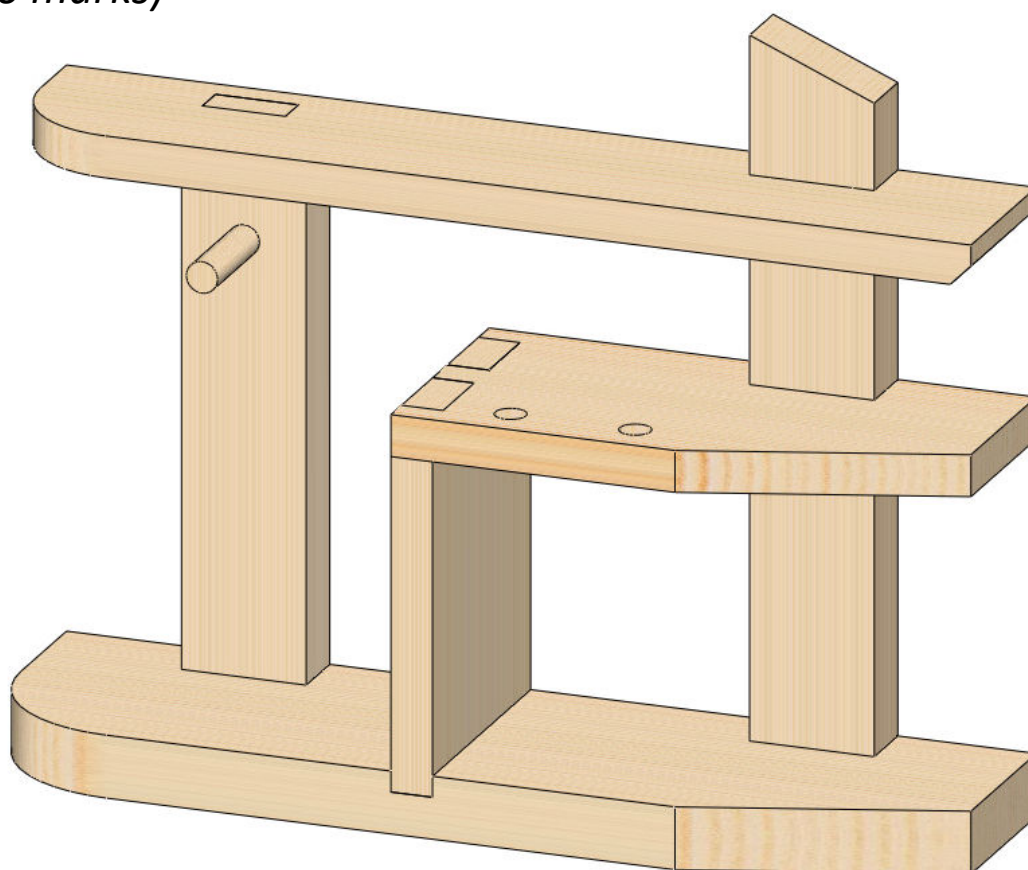
***Leaving Certificate Examination 2025***

# ***Construction Studies***

## ***Practical Test***

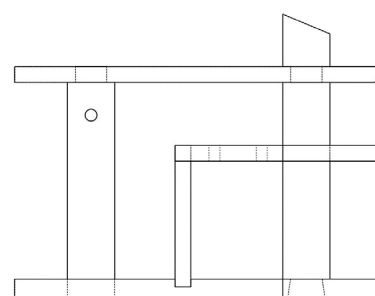
### ***Common Level***

*(150 marks)*



***Marking Scheme***

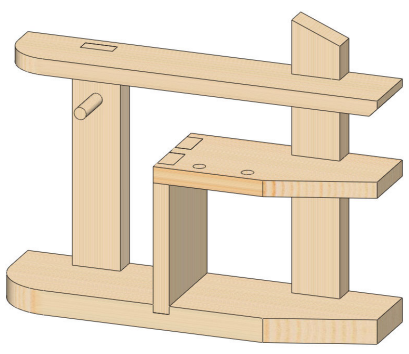
***Day 1***

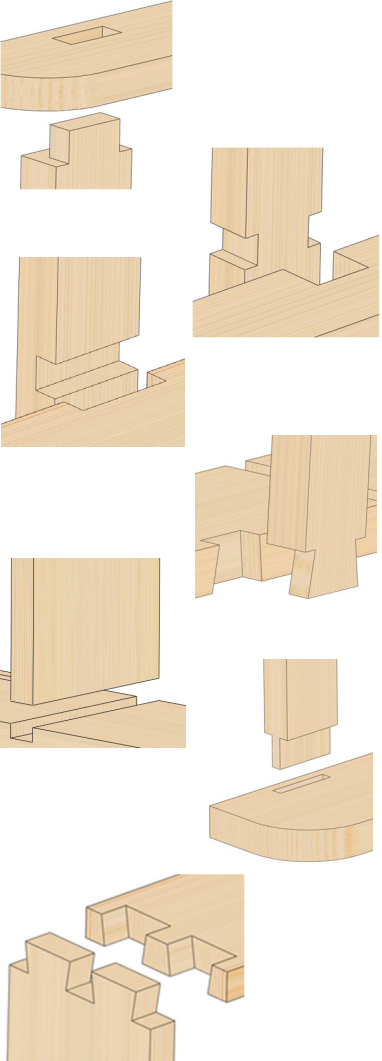


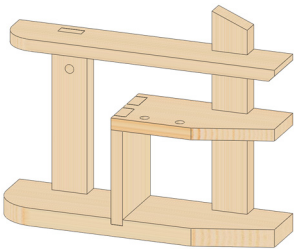
# Marking Scheme – Practical Test

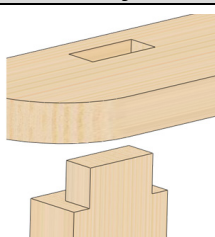
## Note:

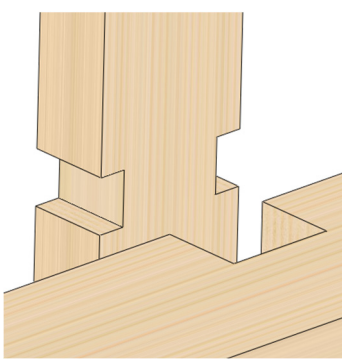
- The artefact is to be hand produced by candidates without the assistance of machinery.
- The use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that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

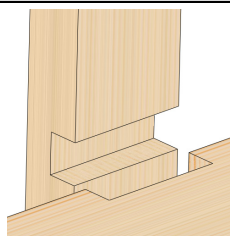
|                                                                                   |              |                                                                                                                                                       |              |
|-----------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (i)          | <b>Overall Assembly</b>                                                                                                                               | <b>Marks</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>2 × 1 mark</i></li> <li>• shaping <i>2 × 1 mark</i></li> </ul> | <b>4</b>     |
|                                                                                   | <b>Total</b> |                                                                                                                                                       | <b>14</b>    |

|                                                                                    |      |                                                                                                                                              |              |
|------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (ii) | <b>Marking Out</b>                                                                                                                           | <b>Marks</b> |
|                                                                                    | a.   | Barefaced mortice and tenon joint <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.   | Notched housing joint <ul style="list-style-type: none"> <li>• trenches <i>3 × 2 marks</i></li> </ul>                                        | <b>6</b>     |
|                                                                                    | c.   | Halving joint <ul style="list-style-type: none"> <li>• trenches <i>2 × 2 marks</i></li> </ul>                                                | <b>4</b>     |
|                                                                                    | d.   | Dovetail joint <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.   | Housing joint base <ul style="list-style-type: none"> <li>• trench <i>2 marks</i></li> </ul>                                                 | <b>2</b>     |
|                                                                                    | f.   | Mortice and tenon joint <ul style="list-style-type: none"> <li>• mortice <i>3 marks</i></li> <li>• tenon <i>3 marks</i></li> </ul>           | <b>6</b>     |
|                                                                                    | g.   | Box dovetail <ul style="list-style-type: none"> <li>• tails <i>2 × 3 marks</i></li> <li>• pins <i>2 × 3 marks</i></li> </ul>                 | <b>12</b>    |

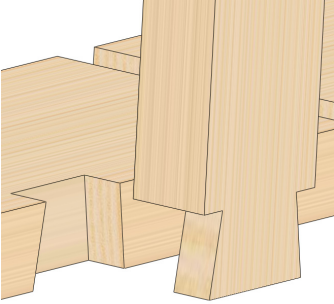
|                                                                                   |              |                                                                                                                                                                           |           |
|-----------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | h.           | Slopes, curves, and chamfer <ul style="list-style-type: none"> <li>slopes <i>3 × 1 mark</i></li> <li>curves <i>2 × 2 marks</i></li> <li>chamfer <i>2 marks</i></li> </ul> | 9         |
|                                                                                   | <b>Total</b> |                                                                                                                                                                           | <b>51</b> |

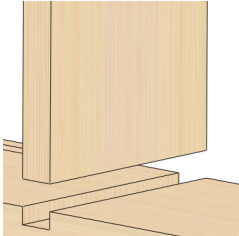
| Processing of Desk Tidy                                                           |              |                        |          |
|-----------------------------------------------------------------------------------|--------------|------------------------|----------|
| Barefaced mortice and tenon joint                                                 | (iii)        | Processing             | Marks    |
|  | a.           | Mortice <i>3 marks</i> | 3        |
|                                                                                   | b.           | Tenon <i>6 marks</i>   | 6        |
|                                                                                   | <b>Total</b> |                        | <b>9</b> |

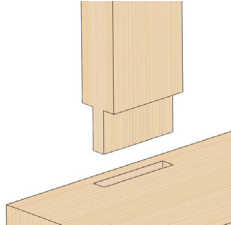
| Notched housing joint                                                               | (iv)         | Processing                                                                                                                                                           | Marks     |
|-------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | a.           | Trench (horizontal) <ul style="list-style-type: none"> <li>sawing across the grain <i>2 × 1 mark</i></li> <li>paring of trench to depth <i>2 marks</i></li> </ul>    | 4         |
|                                                                                     | b.           | Trenches (vertical) <ul style="list-style-type: none"> <li>sawing across the grain <i>4 × 1 mark</i></li> <li>paring trenches to depth <i>2 × 2 marks</i></li> </ul> | 8         |
|                                                                                     | <b>Total</b> |                                                                                                                                                                      | <b>12</b> |

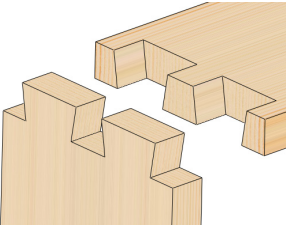
| Halving joint                                                                       | (v)          | Processing                                                                                                                                                | Marks    |
|-------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|  | a.           | Trenches <ul style="list-style-type: none"> <li>saw across the grain <i>4 × 1 mark</i></li> <li>paring of trenches to depth <i>2 × 2 marks</i></li> </ul> | 8        |
|                                                                                     | <b>Total</b> |                                                                                                                                                           | <b>8</b> |

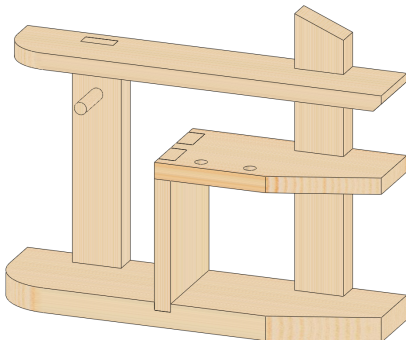


| Dovetail joint                                                                    | (vi)  | Processing                                                                                                                                                | Marks |
|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tail <ul style="list-style-type: none"> <li>sawing tail <math>4 \times 1</math> mark</li> <li>paring tail <math>2 \times 2</math> marks</li> </ul>        | 8     |
|                                                                                   | b.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring trench <math>2</math> marks</li> </ul> | 4     |
|                                                                                   | Total |                                                                                                                                                           | 12    |

| Housing joint (base)                                                               | (vii) | Processing                                                                                                                                                            | Marks |
|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring of trench to depth <math>2</math> marks</li> </ul> | 4     |
|                                                                                    | Total |                                                                                                                                                                       | 4     |

| Mortice and tenon joint                                                             | (viii) | Processing              | Marks |
|-------------------------------------------------------------------------------------|--------|-------------------------|-------|
|  | a.     | Mortice $3$ marks       | 3     |
|                                                                                     | b.     | Tenon $4 \times 1$ mark | 4     |
|                                                                                     | Total  |                         | 7     |

| Box dovetail joint                                                                  | (ix)  | Processing                                                                                                                                                               | Marks |
|-------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tails $2 \times 4$ marks                                                                                                                                                 | 8     |
|                                                                                     | b.    | Pins <ul style="list-style-type: none"> <li>sawing with the grain <math>4 \times 1</math> mark</li> <li>paring across the grain <math>2 \times 2</math> marks</li> </ul> | 8     |
|                                                                                     | Total |                                                                                                                                                                          | 16    |

| Shaping & drilling                                                                | (x)                         | Processing                           | Marks |
|-----------------------------------------------------------------------------------|-----------------------------|--------------------------------------|-------|
|  | a.                          | Short slope1 mark                    | 1     |
|                                                                                   | b.                          | Long slopes2 × 2 marks               | 4     |
|                                                                                   | c.                          | Curves2 × 2 marks                    | 4     |
|                                                                                   | d.                          | Drilling holes accurately3 × 2 marks | 6     |
|                                                                                   | e.                          | Chamfer2 marks                       | 2     |
|                                                                                   | Total                       |                                      | 17    |
|                                                                                   |                             |                                      |       |
|                                                                                   | Overall Completion of Piece |                                      | Marks |
|                                                                                   | Grand Total                 |                                      | 150   |



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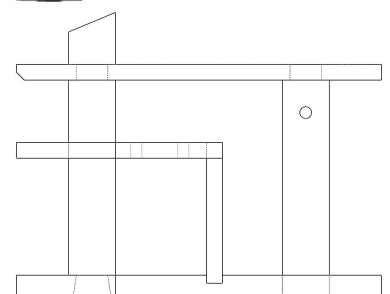
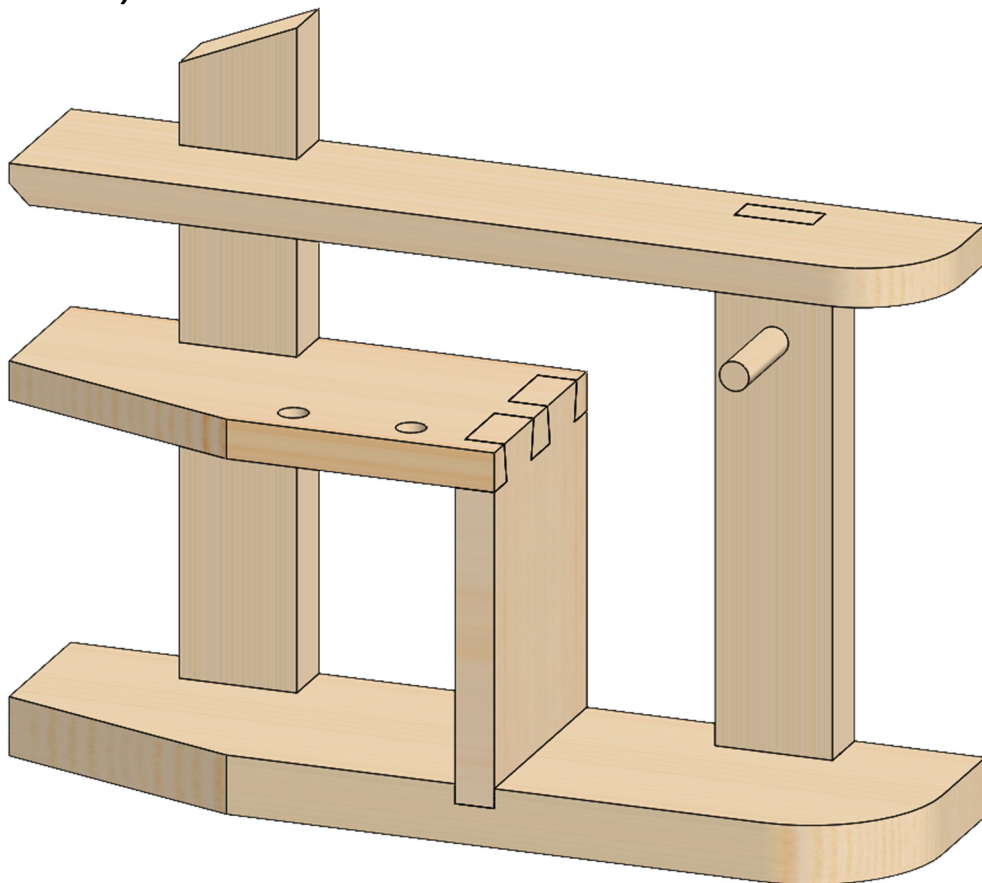
***Leaving Certificate Examination 2025***

# ***Construction Studies***

## ***Practical Test***

### ***Common Level***

*(150 marks)*



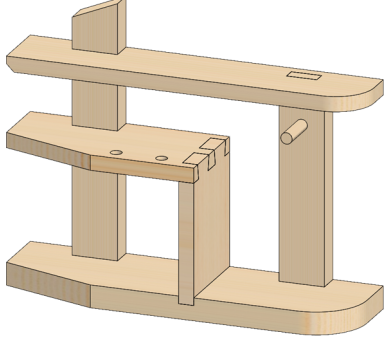
***Marking Scheme***

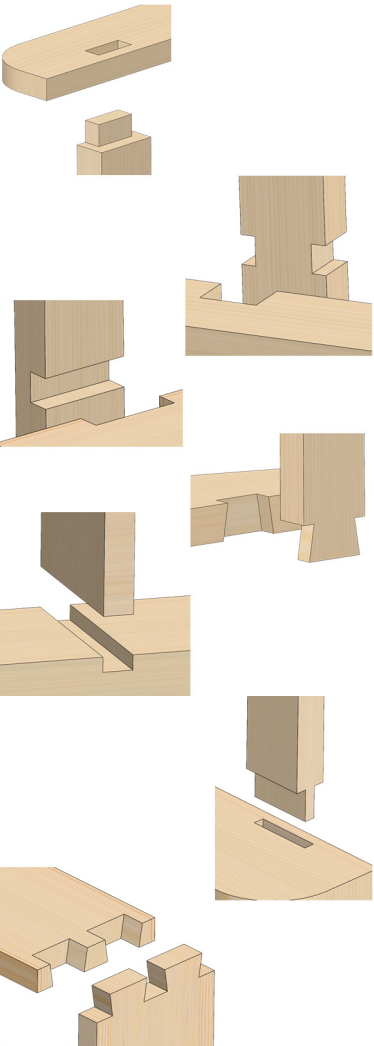
***Day 2***

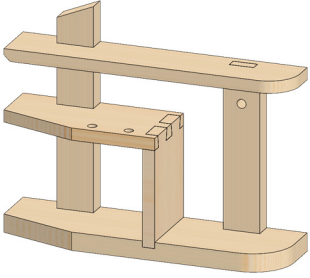
# Marking Scheme – Practical Test

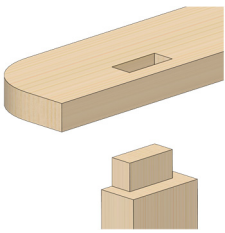
## Note:

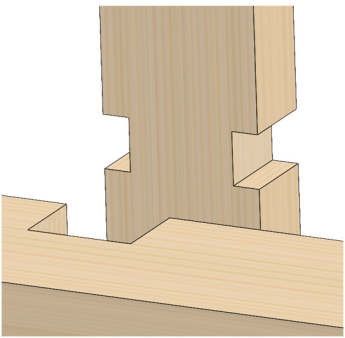
- The artefact is to be hand produced by candidates without the assistance of machinery.
- The use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that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

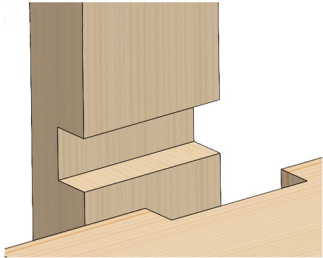
|                                                                                   |              |                                                                                                                                                       |              |
|-----------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (i)          | <b>Overall Assembly</b>                                                                                                                               | <b>Marks</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>2 × 1 mark</i></li> <li>• shaping <i>2 × 1 mark</i></li> </ul> | <b>4</b>     |
|                                                                                   | <b>Total</b> |                                                                                                                                                       | <b>14</b>    |

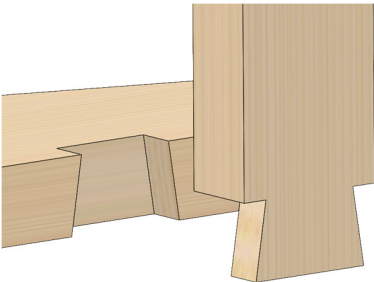
|                                                                                    |      |                                                                                                                                              |              |
|------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (ii) | <b>Marking Out</b>                                                                                                                           | <b>Marks</b> |
|                                                                                    | a.   | Barefaced mortice and tenon joint <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.   | Notched housing joint <ul style="list-style-type: none"> <li>• trenches <i>3 × 2 marks</i></li> </ul>                                        | <b>6</b>     |
|                                                                                    | c.   | Halving joint <ul style="list-style-type: none"> <li>• trenches <i>2 × 2 marks</i></li> </ul>                                                | <b>4</b>     |
|                                                                                    | d.   | Dovetail joint <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.   | Housing joint base <ul style="list-style-type: none"> <li>• trench <i>2 marks</i></li> </ul>                                                 | <b>2</b>     |
|                                                                                    | f.   | Mortice and tenon joint <ul style="list-style-type: none"> <li>• mortice <i>3 marks</i></li> <li>• tenon <i>3 marks</i></li> </ul>           | <b>6</b>     |
|                                                                                    | g.   | Box dovetail <ul style="list-style-type: none"> <li>• tails <i>2 × 3 marks</i></li> <li>• pins <i>2 × 3 marks</i></li> </ul>                 | <b>12</b>    |

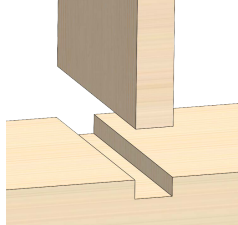
|                                                                                   |              |                                                                                                                                                                           |           |
|-----------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | h.           | Slopes, curves, and chamfer <ul style="list-style-type: none"> <li>slopes <i>3 x 1 mark</i></li> <li>curves <i>2 x 2 marks</i></li> <li>chamfer <i>2 marks</i></li> </ul> | <b>9</b>  |
|                                                                                   | <b>Total</b> |                                                                                                                                                                           | <b>51</b> |

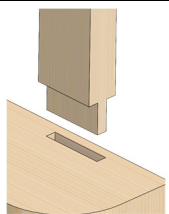
| Processing of Desk Tidy                                                           |              |                        |          |
|-----------------------------------------------------------------------------------|--------------|------------------------|----------|
| Barefaced mortice and tenon joint                                                 | (iii)        | Processing             | Marks    |
|  | a.           | Mortice <i>3 marks</i> | <b>3</b> |
|                                                                                   | b.           | Tenon <i>6 marks</i>   | <b>6</b> |
|                                                                                   | <b>Total</b> |                        | <b>9</b> |

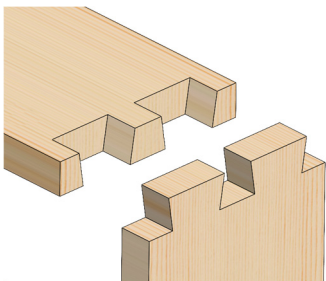
| Notched housing joint                                                               | (iv)         | Processing                                                                                                                                                           | Marks     |
|-------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | a.           | Trench (horizontal) <ul style="list-style-type: none"> <li>sawing across the grain <i>2 x 1 mark</i></li> <li>paring of trench to depth <i>2 marks</i></li> </ul>    | <b>4</b>  |
|                                                                                     | b.           | Trenches (vertical) <ul style="list-style-type: none"> <li>sawing across the grain <i>4 x 1 mark</i></li> <li>paring trenches to depth <i>2 x 2 marks</i></li> </ul> | <b>8</b>  |
|                                                                                     | <b>Total</b> |                                                                                                                                                                      | <b>12</b> |

| Halving joint                                                                       | (v)          | Processing                                                                                                                                                | Marks    |
|-------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|  | a.           | Trenches <ul style="list-style-type: none"> <li>saw across the grain <i>4 x 1 mark</i></li> <li>paring of trenches to depth <i>2 x 2 marks</i></li> </ul> | <b>8</b> |
|                                                                                     | <b>Total</b> |                                                                                                                                                           | <b>8</b> |

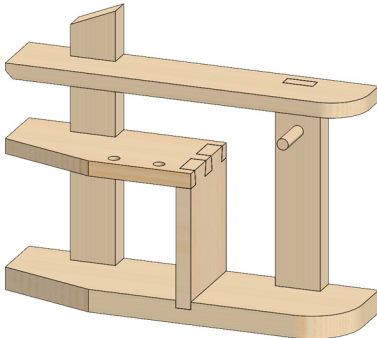
| Dovetail joint                                                                    | (vi)  | Processing                                                                                                                                                | Marks |
|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tail <ul style="list-style-type: none"> <li>sawing tail <math>4 \times 1</math> mark</li> <li>paring tail <math>2 \times 2</math> marks</li> </ul>        | 8     |
|                                                                                   | b.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring trench <math>2</math> marks</li> </ul> | 4     |
|                                                                                   | Total |                                                                                                                                                           | 12    |

| Housing joint (base)                                                               | (vii) | Processing                                                                                                                                                            | Marks |
|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring of trench to depth <math>2</math> marks</li> </ul> | 4     |
|                                                                                    | Total |                                                                                                                                                                       | 4     |

| Mortice and tenon joint                                                             | (viii) | Processing              | Marks |
|-------------------------------------------------------------------------------------|--------|-------------------------|-------|
|  | a.     | Mortice $3$ marks       | 3     |
|                                                                                     | b.     | Tenon $4 \times 1$ mark | 4     |
|                                                                                     | Total  |                         | 7     |

| Box dovetail joint                                                                  | (ix)  | Processing                                                                                                                                                               | Marks |
|-------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tails $2 \times 4$ marks                                                                                                                                                 | 8     |
|                                                                                     | b.    | Pins <ul style="list-style-type: none"> <li>sawing with the grain <math>4 \times 1</math> mark</li> <li>paring across the grain <math>2 \times 2</math> marks</li> </ul> | 8     |
|                                                                                     | Total |                                                                                                                                                                          | 16    |



| Shaping & drilling                                                                | (x)                         | Processing                                      | Marks      |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------|------------|
|  | a.                          | Short slope<br><i>1 mark</i>                    | <b>1</b>   |
|                                                                                   | b.                          | Long slopes<br><i>2 × 2 marks</i>               | <b>4</b>   |
|                                                                                   | c.                          | Curves<br><i>2 × 2 marks</i>                    | <b>4</b>   |
|                                                                                   | d.                          | Drilling holes accurately<br><i>3 × 2 marks</i> | <b>6</b>   |
|                                                                                   | e.                          | Chamfer<br><i>2 marks</i>                       | <b>2</b>   |
|                                                                                   | Total                       |                                                 | <b>17</b>  |
|                                                                                   |                             |                                                 |            |
|                                                                                   | Overall Completion of Piece |                                                 | Marks      |
|                                                                                   | Grand Total                 |                                                 | <b>150</b> |



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

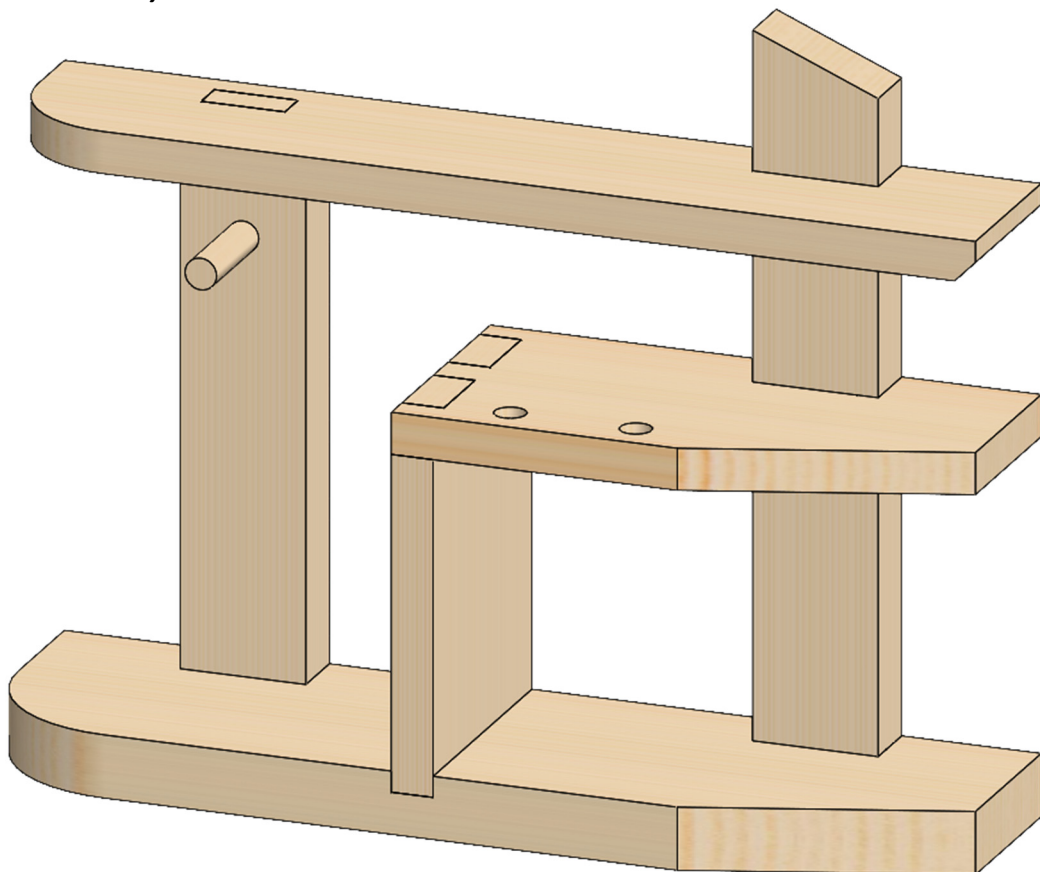
***Leaving Certificate Examination 2025***

# ***Construction Studies***

## ***Practical Test***

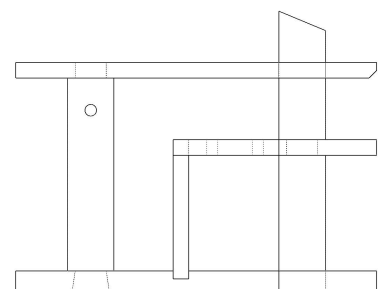
### ***Common Level***

*(150 marks)*



***Marking Scheme***

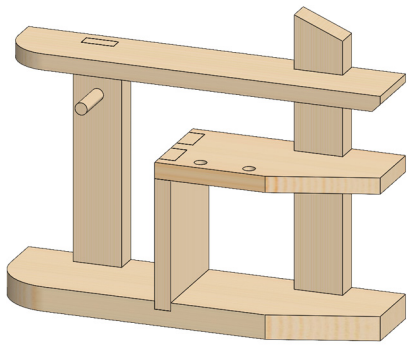
***Day 3***

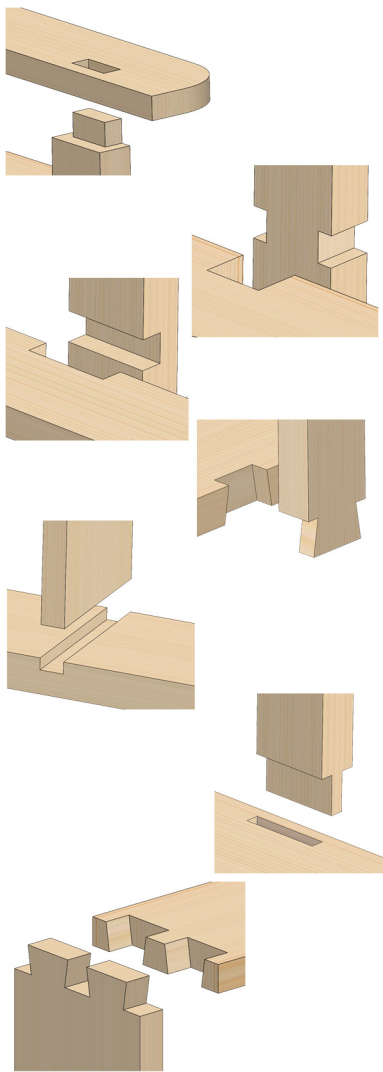


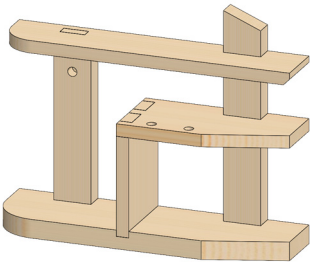
# Marking Scheme – Practical Test

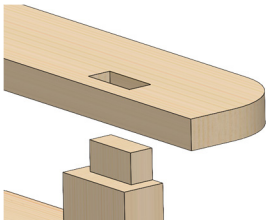
## Note:

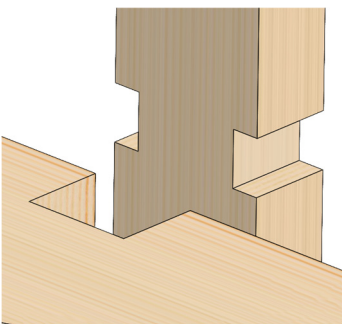
- The artefact is to be hand produced by candidates without the assistance of machinery.
- The use of a battery powered screwdriver is allowed.
- Where there is evidence of the use of machinery for a particular procedure a penalty applies.
- Component is marked out of 50% of the marks available for that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

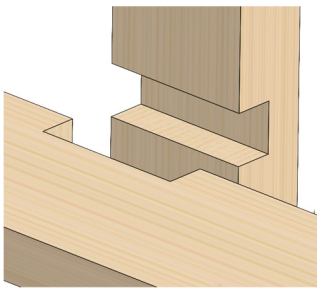
|                                                                                   |              |                                                                                                                                                       |              |
|-----------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (i)          | <b>Overall Assembly</b>                                                                                                                               | <b>Marks</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>2 × 1 mark</i></li> <li>• shaping <i>2 × 1 mark</i></li> </ul> | <b>4</b>     |
|                                                                                   | <b>Total</b> |                                                                                                                                                       | <b>14</b>    |

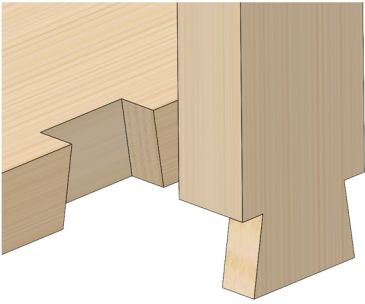
|                                                                                    |      |                                                                                                                                              |              |
|------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|  | (ii) | <b>Marking Out</b>                                                                                                                           | <b>Marks</b> |
|                                                                                    | a.   | Barefaced mortice and tenon joint <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.   | Notched housing joint <ul style="list-style-type: none"> <li>• trenches <i>3 × 2 marks</i></li> </ul>                                        | <b>6</b>     |
|                                                                                    | c.   | Halving joint <ul style="list-style-type: none"> <li>• trenches <i>2 × 2 marks</i></li> </ul>                                                | <b>4</b>     |
|                                                                                    | d.   | Dovetail joint <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.   | Housing joint base <ul style="list-style-type: none"> <li>• trench <i>2 marks</i></li> </ul>                                                 | <b>2</b>     |
|                                                                                    | f.   | Mortice and tenon joint <ul style="list-style-type: none"> <li>• mortice <i>3 marks</i></li> <li>• tenon <i>3 marks</i></li> </ul>           | <b>6</b>     |
|                                                                                    | g.   | Box dovetail <ul style="list-style-type: none"> <li>• tails <i>2 × 3 marks</i></li> <li>• pins <i>2 × 3 marks</i></li> </ul>                 | <b>12</b>    |

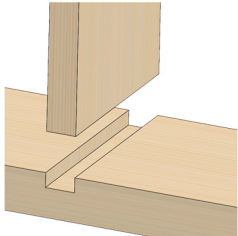
|                                                                                   |              |                                                                                                                                                                                                                                                                                    |           |
|-----------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | h.           | Slopes, curves, and chamfer <ul style="list-style-type: none"> <li>slopes <span style="float: right;"><i>3 × 1 mark</i></span></li> <li>curves <span style="float: right;"><i>2 × 2 marks</i></span></li> <li>chamfer <span style="float: right;"><i>2 marks</i></span></li> </ul> | 9         |
|                                                                                   | <b>Total</b> |                                                                                                                                                                                                                                                                                    | <b>51</b> |

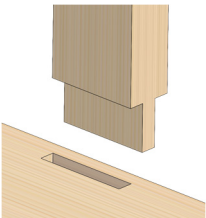
| Processing of Desk Tidy                                                           |              |                                                           |          |
|-----------------------------------------------------------------------------------|--------------|-----------------------------------------------------------|----------|
| Barefaced mortice and tenon joint                                                 | (iii)        | Processing                                                | Marks    |
|  | a.           | Mortice <span style="float: right;"><i>3 marks</i></span> | 3        |
|                                                                                   | b.           | Tenon <span style="float: right;"><i>6 marks</i></span>   | 6        |
|                                                                                   | <b>Total</b> |                                                           | <b>9</b> |

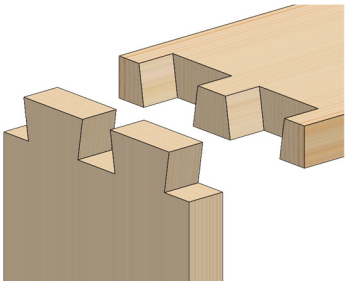
| Notched housing joint                                                               | (iv)         | Processing                                                                                                                                                                                                                                 | Marks     |
|-------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|  | a.           | Trench (horizontal) <ul style="list-style-type: none"> <li>sawing across the grain <span style="float: right;"><i>2 × 1 mark</i></span></li> <li>paring of trench to depth <span style="float: right;"><i>2 marks</i></span></li> </ul>    | 4         |
|                                                                                     | b.           | Trenches (vertical) <ul style="list-style-type: none"> <li>sawing across the grain <span style="float: right;"><i>4 × 1 mark</i></span></li> <li>paring trenches to depth <span style="float: right;"><i>2 × 2 marks</i></span></li> </ul> | 8         |
|                                                                                     | <b>Total</b> |                                                                                                                                                                                                                                            | <b>12</b> |

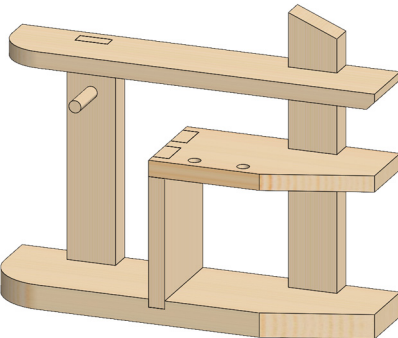
| Halving joint                                                                       | (v)          | Processing                                                                                                                                                                                                                      | Marks    |
|-------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|  | a.           | Trenches <ul style="list-style-type: none"> <li>saw across the grain <span style="float: right;"><i>4 × 1 mark</i></span></li> <li>paring of trenches to depth <span style="float: right;"><i>2 × 2 marks</i></span></li> </ul> | 8        |
|                                                                                     | <b>Total</b> |                                                                                                                                                                                                                                 | <b>8</b> |

| Dovetail joint                                                                    | (vi)  | Processing                                                                                                                                                | Marks |
|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tail <ul style="list-style-type: none"> <li>sawing tail <math>4 \times 1</math> mark</li> <li>paring tail <math>2 \times 2</math> marks</li> </ul>        | 8     |
|                                                                                   | b.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring trench <math>2</math> marks</li> </ul> | 4     |
|                                                                                   | Total |                                                                                                                                                           | 12    |

| Housing joint (base)                                                               | (vii) | Processing                                                                                                                                                            | Marks |
|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Trench <ul style="list-style-type: none"> <li>sawing across the grain <math>2 \times 1</math> mark</li> <li>paring of trench to depth <math>2</math> marks</li> </ul> | 4     |
|                                                                                    | Total |                                                                                                                                                                       | 4     |

| Mortice and tenon joint                                                             | (viii) | Processing              | Marks |
|-------------------------------------------------------------------------------------|--------|-------------------------|-------|
|  | a.     | Mortice $3$ marks       | 3     |
|                                                                                     | b.     | Tenon $4 \times 1$ mark | 4     |
|                                                                                     | Total  |                         | 7     |

| Box dovetail joint                                                                  | (ix)  | Processing                                                                                                                                                               | Marks |
|-------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|  | a.    | Tails $2 \times 4$ marks                                                                                                                                                 | 8     |
|                                                                                     | b.    | Pins <ul style="list-style-type: none"> <li>sawing with the grain <math>4 \times 1</math> mark</li> <li>paring across the grain <math>2 \times 2</math> marks</li> </ul> | 8     |
|                                                                                     | Total |                                                                                                                                                                          | 16    |

| Shaping & drilling                                                                | (x)                         | Processing                                      | Marks      |
|-----------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------|------------|
|  | a.                          | Short slope<br><i>1 mark</i>                    | <b>1</b>   |
|                                                                                   | b.                          | Long slopes<br><i>2 × 2 marks</i>               | <b>4</b>   |
|                                                                                   | c.                          | Curves<br><i>2 × 2 marks</i>                    | <b>4</b>   |
|                                                                                   | d.                          | Drilling holes accurately<br><i>3 × 2 marks</i> | <b>6</b>   |
|                                                                                   | e.                          | Chamfer<br><i>2 marks</i>                       | <b>2</b>   |
|                                                                                   | Total                       |                                                 | <b>17</b>  |
|                                                                                   |                             |                                                 |            |
|                                                                                   | Overall Completion of Piece |                                                 | Marks      |
|                                                                                   | Grand Total                 |                                                 | <b>150</b> |



**Leaving Certificate Examination**  
**Construction Studies**  
**Practical Coursework**  
**Marking Scheme**

| <b>Marking Criteria</b> |                                                                                                                                                                                                                                                                                                 | <b>Marks</b> |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>A</b>                | <b>Planning of Project</b> <ul style="list-style-type: none"><li>• Coursework selection, exploration and management planning</li><li>• Investigation and relevant research</li><li>• Design development through annotated sketches, with working drawing(s) and/or models</li></ul>             | <b>40</b>    |
| <b>B</b>                | <b>Report</b> <ul style="list-style-type: none"><li>• Sequence of manufacture including photographic evidence and/or sketches</li><li>• Critical appraisal and conclusions from coursework experience</li><li>• Overall quality of communication and presentation of the design folio</li></ul> | <b>35</b>    |
| <b>C</b>                | <b>Manipulative Skills</b> <ul style="list-style-type: none"><li>• Marking-out of materials</li><li>• Processing and assembly of materials</li><li>• Range and depth of skills evident in the artefact</li></ul>                                                                                | <b>40</b>    |
| <b>D</b>                | <b>Completion of Project</b> <ul style="list-style-type: none"><li>• Artefact well finished</li><li>• Creativity and appropriateness of coursework</li><li>• Overall quality, coherence and presentation of coursework</li></ul>                                                                | <b>35</b>    |
| <b>Total</b>            |                                                                                                                                                                                                                                                                                                 | <b>150</b>   |

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



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