



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

CIVIL TECHNOLOGY: WOODWORKING

EXEMPLAR 2018

MARKING GUIDELINES

MARKS: 200

This marking guideline consists of 15 pages.

QUESTION 1: OHS, MATERIALS, TOOLS, EQUIPMENT AND JOINING (GENERIC)

- | | | | |
|-----|--------|---|-----|
| 1.1 | 1.1.1 | H ✓ | (1) |
| | 1.1.2 | A ✓ | (1) |
| | 1.1.3 | E ✓ | (1) |
| | 1.1.4 | C ✓ | (1) |
| | 1.1.5 | D ✓ | (1) |
| | 1.1.6 | J ✓ | (1) |
| | 1.1.7 | I ✓ | (1) |
| | 1.1.8 | G ✓ | (1) |
| | 1.1.9 | B ✓ | (1) |
| | 1.1.10 | F ✓ | (1) |
| 1.2 | 1.2.1 | A – Laser level ✓ B – Measuring staff ✓ C – Tripod ✓ | (3) |
| | 1.2.2 | <ul style="list-style-type: none"> • Place the laser level in its case after use. ✓ • Do not bump the instrument against objects or drop it. • Never open the housing or attempt to disassemble the instrument. • Never store the laser level in hot or extremely cold areas. <p>ANY ONE OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWER</p> | (1) |
| 1.3 | 1.3.1 | <ul style="list-style-type: none"> • Do not throw any tools or materials from a scaffold. ✓ • Never jump on a scaffold. ✓ • Never overload a scaffold. • Remove or cover sharp edges or corners • Always attach free-standing scaffoldings to a building • Never jump on and off a scaffold. • Use a ladder to get on and off a scaffold. <p>ANY TWO OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWERS</p> | (2) |
| | 1.3.2 | <ul style="list-style-type: none"> • It prevents workers from falling off the scaffold. ✓ • To prevent materials from falling off the scaffold. • It is used as a hand rail. • It is used to strap on safety harnesses. <p>ANY ONE OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWER</p> | (1) |

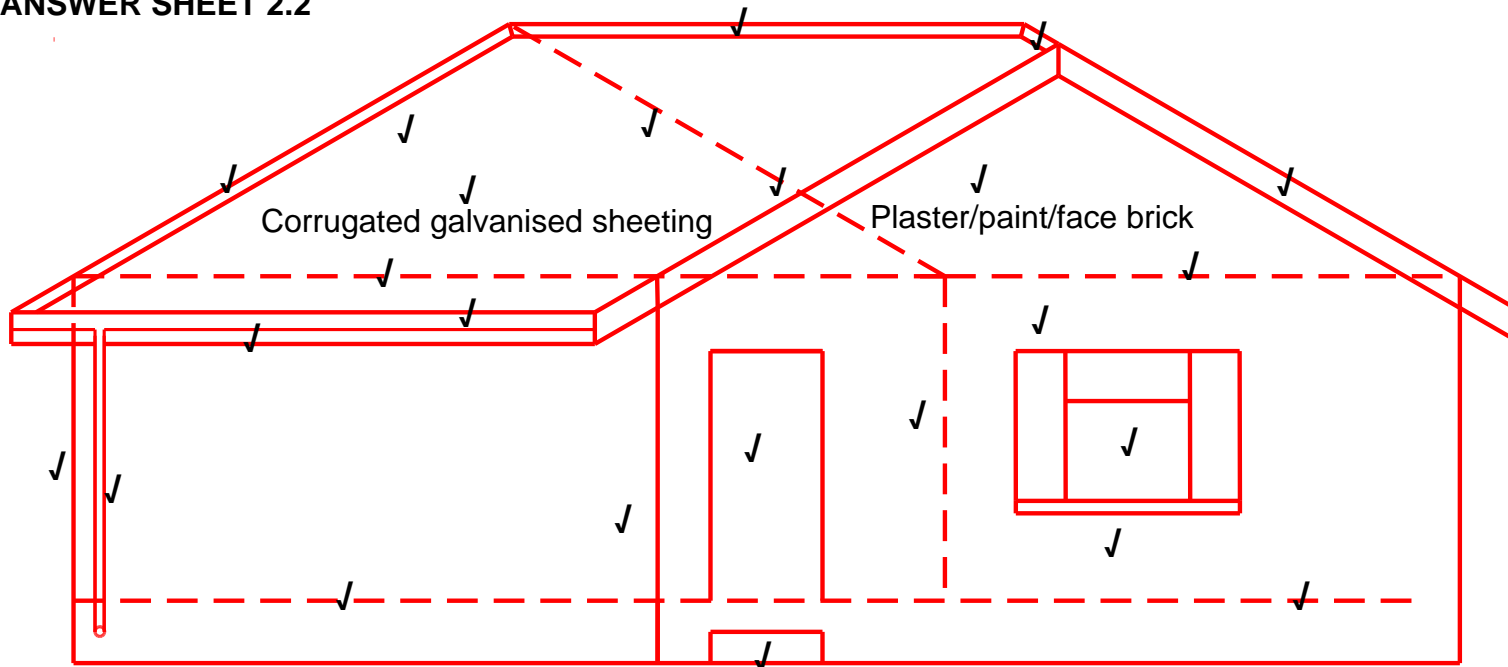
- 1.3.3
- The toe board will prevent tools from sliding of the scaffold. ✓
 - The toe board will prevent workmen from stepping off the scaffold.
- ANY ONE OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWER**
- (1)
- 1.3.4
- Vertical standards can sink into the ground. ✓
 - The scaffold may rock to and fro.
- ANY ONE OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWER**
- (1)
- 1.4 Bolts and nuts
- (1)
[20]

QUESTION 2: GRAPHICS AS METHOD OF COMMUNICATION (GENERIC)

| NO. | QUESTIONS | ANSWERS | MARKS |
|------------|---|--------------------------------------|--------------|
| 1 | Identify FIGURE A. | Floor plan of ground floor | 1 |
| 2 | Identify FIGURE B. | Floor plan of first floor | 1 |
| 3 | Identify FIGURE D. | Site plan | 1 |
| 4 | What do the short dashed lines in FIGURE B indicate? | The roof line of the building | 1 |
| 5 | What type of roof is used on this building? | Gable roof | 1 |
| 6 | Name the scale that was used to draw FIGURE B. | 1 : 100 | 1 |
| 7 | Name the scale that was used to draw FIGURE D | 1 : 500 | 1 |
| 8 | On what side of the building is the bathrooms situated? | South side | 1 |
| 9 | What is indicated by number 1? | Proposed building | 1 |
| 10 | What is indicated by number 2? | Gully | 1 |
| 11 | What is indicated by number 3? | Existing building | 1 |
| 12 | What is indicated by number 4? | North direction | 1 |
| 13 | What is indicated by number 5? | Gable wall | 1 |
| 14 | What is indicated by number 6? | Finished floor level of ground floor | 1 |
| 15 | What is indicated by number 7? | One-way switch double pole | 1 |
| | | TOTAL | 15 |

2.2 GRAPHICS AND COMMUNICATION (GENERIC)

ANSWER SHEET 2.2



Application of scale ✓ ✓ ✓

NOT TO SCALE: USE A MASK TO MARK THIS QUESTION

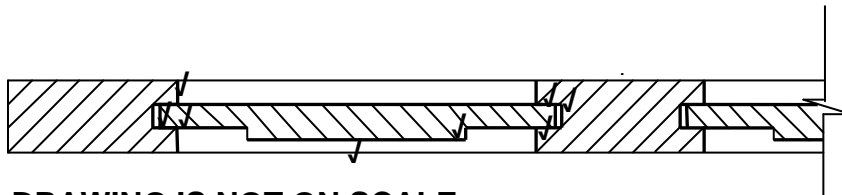
| ASSESSMENT CRITERIA | MARKS | LM |
|---|-----------|----|
| External Walls | 3 | |
| NGL (correctly indicated) | 1 | |
| FFL (correctly indicated) | 1 | |
| Window | 1 | |
| Window sill | 1 | |
| Door opening | 1 | |
| Step | 1 | |
| Fascia board | 1 | |
| Barge board | 2 | |
| Roof (correctly drawn) | 3 | |
| Gutter | 1 | |
| Rain-water down pipe | 1 | |
| Ridge capping | 1 | |
| Determining roof height | 2 | |
| Any two labels | 2 | |
| Application of scale One or two incorrect = 3 Three or four incorrect = 2 More than five incorrect = 1 No measurement correct = 0 | 3 | |
| TOTAL | 25 | |

[40]

QUESTION 3: CASEMENTS, DOORS, WALLPANELLING AND CUPBOARDS (SPECIFIC)

- 3.1 3.1.1 A transom is a horizontal member ✓ that separates ✓ the casement ✓ and fanlight ✓ (4)
- 3.1.2 A glazing bar separate the window panes ✓
A glazing bar provides a rebate into which window panes are fitted. (1)
- 3.2 3.2.1 Fanlights improve the appearance ✓ of casements and can open separately for ventilation. (1)
- ANY ONE OF THE ABOVE**
- 3.2.2 A Mullion ✓
B Frame stile ✓
C Putty or glazing beads ✓
D Window pane/glass ✓
E Sill ✓ (5)
- 3.2.3 Horn – The wall must be built around the horn to secure the frame into the wall. ✓ (1)
- 3.2.4 Router ✓ (1)
- 3.2.5 Hinge ✓ (1)

3.3

**DRAWING IS NOT ON SCALE**

| ASSESSMENT CRITERIA | MARK | CANDIDATE'S MARK |
|---------------------|----------|------------------|
| Tongue | 3 | |
| Groove | 3 | |
| Raised panel | 2 | |
| TOTAL | 8 | |

(8)

- 3.4 A Wall ✓
B Capping ✓
C Tong-and-groove board ✓

D Horizontal rough grounds ✓

E Skirting ✓

(5)

3.5 Built-in cupboards are fixed ✓ to walls and free standing cupboards can be moved around the room. ✓

(2)

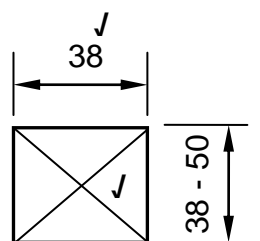
3.6 An oval rail does not bend easily with the load of clothes. ✓

(1)

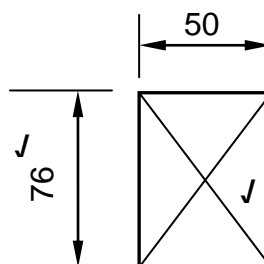
[30]

QUESTION 4: ROOFS AND CEILINGS (SPECIFIC)

4.1



BATTEN

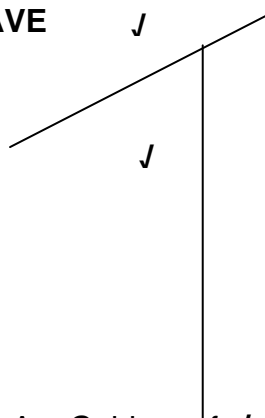


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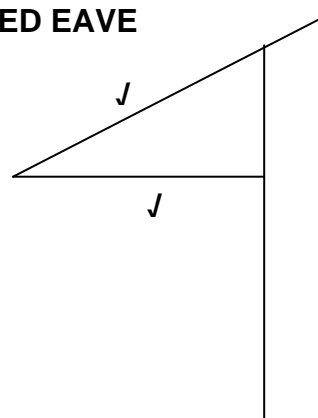
(4)

4.2

OPEN EAVE



CLOSED EAVE



4.3

4.3.1

- A – Gable roof ✓
- B – Hipped roof ✓

(4)

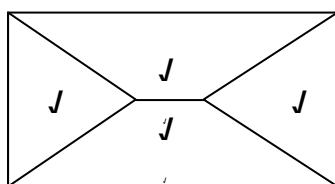
4.3.2

More roofing material will be required. ✓
It is more labour intensive

(2)

(1)

4.3.3



(4)

4.3.4

- The roof truss must be sturdy enough to carry the roof covering safely. ✓
- The roof truss must be able to withstand wind and other forces that act on them.
- The roof truss must provide adequate height in any room immediately below the roof and ceiling assembly.
- The roof truss should not allow the accumulation of rainwater upon the roof surface.
- The roof truss must be neat and solid to enhance the appearance of the building.

(1)

ANY ONE OF THE ABOVE OR ANY OTHER ACCEPTABLE ANSWER

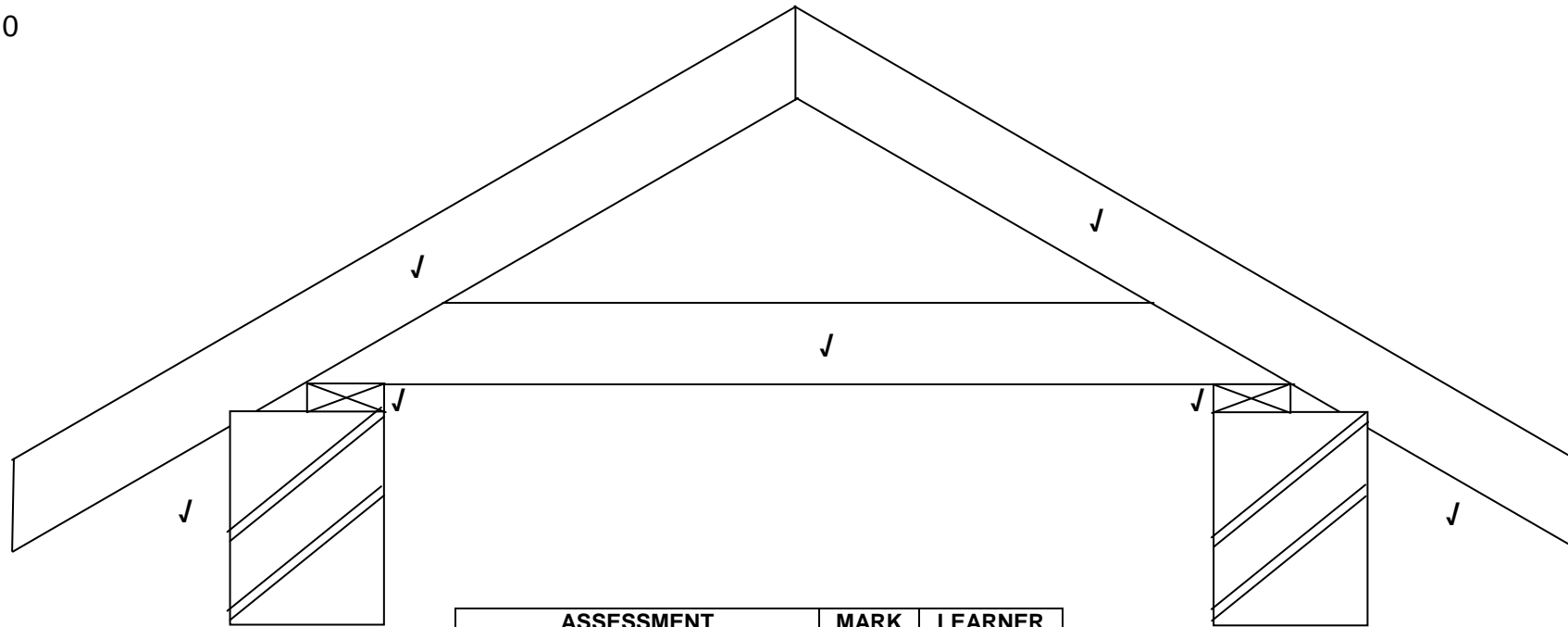
- 4.4 Different types of reed and grass. ✓
Cape thatching reed ✓
Red grass found in the Bushveld and Lowveld (2)
ANY TWO OF THE ABOVE
- 4.5 4.5.1 Truss hangers are used to fix trusses to a wall. ✓ (1)
- 4.5.2 Storm clips prevent the tiles from lifting off the roof on very windy days. ✓ (1)
- 4.6 The trap door allows access into the roof area. ✓ (1)
- 4.7 Push up gypsum-board trapdoor ✓
Hinged trapdoor
ANY ONE OF THE ABOVE (1)
- 4.8 450 mm ✓ (1)

4.9

| A | B | C | D |
|----|---------------------------|--|---|
| | | | Length to be covered by tiles |
| | | | Length of roof is 9 700 mm |
| | | | Width of roof is 3 650 mm |
| | | | |
| | | | Area of roof to be tiled $x = 35,405 \text{ m}^2$ |
| 1/ | $\frac{\checkmark}{9,7}$ | | Length of roof <u>9,7 m</u> |
| | $\frac{\checkmark}{3,65}$ | $\frac{\checkmark}{35,41 \text{ m}^2}$ | Width of roof <u>3.65 m</u> |
| | | | = <u>35,41</u> m ² roof covering needed |
| | | | |
| | | | Number of roof tiles required is |
| | | | <u>Area of roof</u> Area of tile \checkmark |
| | | | = $\frac{35,41}{0,123} \checkmark$ |
| | | | = <u>287,89</u> number of roof tiles needed |
| | | | or = <u>288 roof tiles</u> \checkmark |
| | | | |

(7)

4.10



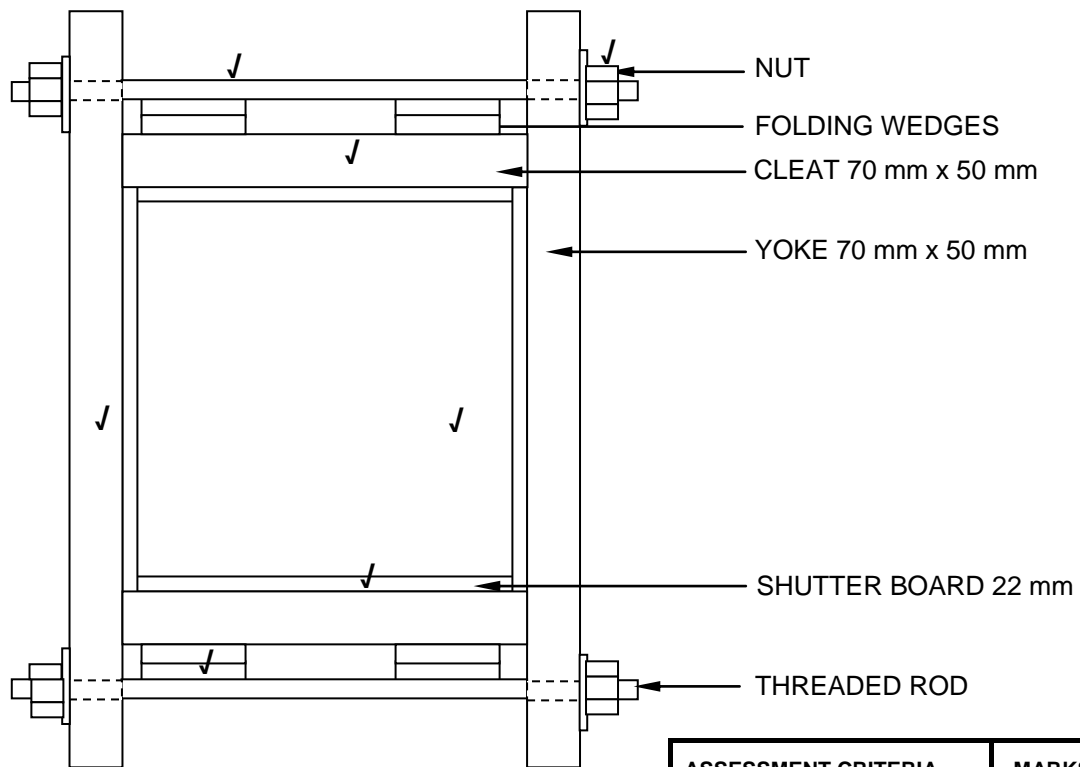
| ASSESSMENT CRITERIA | MARK | LEARNER MARK |
|------------------------------|-----------|--------------|
| Wall plate | 2 | |
| Tie beam | 1 | |
| Rafters | 2 | |
| Eaves | 2 | |
| Application of scale | | |
| One or two incorrect = 3 | 3 | |
| Three or four incorrect = 2 | | |
| More than five incorrect = 1 | | |
| No measurement correct = 0 | | |
| TOTAL | 10 | |

[40]

QUESTION 5: CENTERING, FORMWORK, SHORING AND IRONMONGERY (SPECIFIC)

- 5.1 To make sure the profile of the template is correct before they are copied to solid timber and ribs ✓
Avoid wastage if mistakes are made ✓
It is easier to set out the profile of the ribs on the floor than when it is in-situ. (2)
ANY TWO OF THE ABOVE
- 5.2 5.2.1 Folding wedges are inserted at the ends of a prop ✓, under bearers ✓ and on top of the props. ✓ (3)
5.2.2 The use of the wedges are to lower ✓ or raise ✓ the centre (2)
5.2.3 Table saw ✓
Band saw ✓
Jig saw
Portable circular saw
Circular saw
ANY TWO OF THE ABOVE (2)
- 5.3 A Space between laggings ✓
B Laggings ✓
C Ribs ✓
D Bearer ✓ (4)
- 5.4 5.4.1 Mortise lock ✓ (1)
5.4.2 Lock rail ✓
Low lock rail
Stile of door (1)
ANY ONE OF THE ABOVE
- 5.4.3 Ledge batten door/Ledge braced batten door ✓ (1)
5.4.4 Striker plate. ✓ (1)
- 5.5 Plastic ✓
Metal sheeting ✓
Hardboard ✓
Fibreglass
Perspex (3)
ANY THREE OF THE ABOVE

5.6



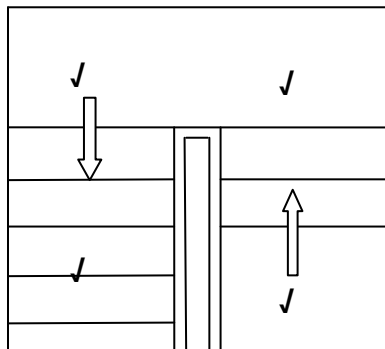
| ASSESSMENT CRITERIA | MARKS | LM |
|------------------------------|-----------|----|
| Column | 1 | |
| Shutter board | 1 | |
| Yokes | 1 | |
| Cleats | 1 | |
| Wedges | 1 | |
| Threaded bolts | 1 | |
| Nuts | 1 | |
| Application of scale | | |
| One or two incorrect = 3 | | |
| Three or four incorrect = 2 | | |
| More than five incorrect = 1 | | |
| No measurement correct = 0 | 3 | |
| TOTAL | 10 | |

[30]

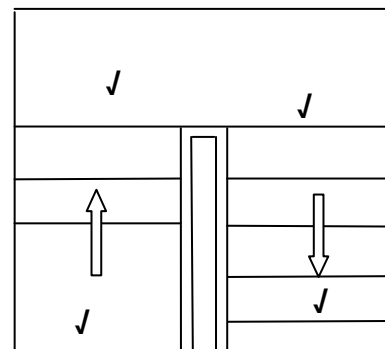
QUESTION 6: SUSPENDED FLOORS AND STAIRCASES (SPECIFIC)

- 6.1 6.1.1 C ✓
 6.1.2 C ✓
 6.1.3 A ✓
 6.1.4 B ✓
 6.1.5 D ✓ (5)
- 6.2 Handrails will assist people when they ascend or descend stairs. ✓
 Balustrades are fixed onto the handrails to form a safe structure. ✓ (2)
- 6.3 Landings are platforms that afford people a place to rest when they ascend or
 descend stairs. ✓
 Landings provide an opportunity to change direction in a flight of stairs. ✓ (2)
- 6.4 In line strutting are placed in a straight line between floor joists. ✓
 In Staggered strutting every alternate struts will be in line with each other. ✓ (2)
- 6.5 Dust and dirt will build up in the gap between the floor board and wall. ✓ (1)

6.6



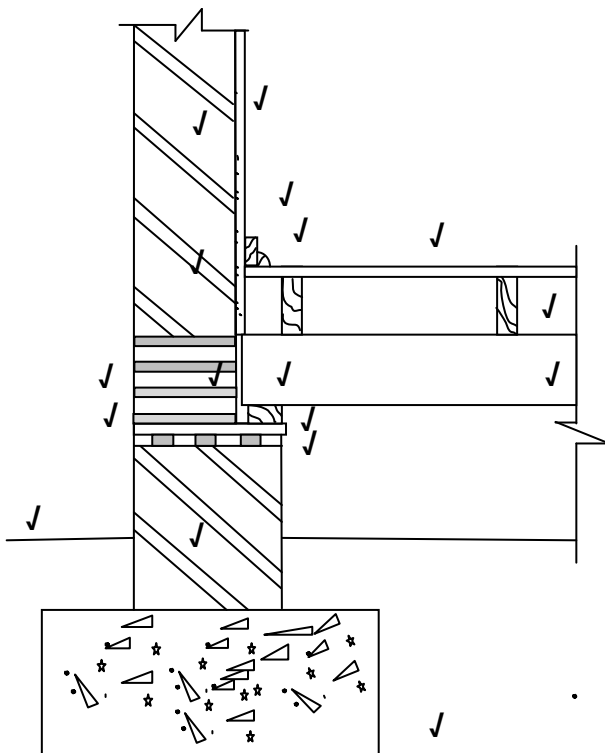
LEFT-SIDED STAIRCASE



RIGHT-SIDED STAIRCASE

(8)

6.7



**DRAWING NOT TO SCALE
USE A MASK TO MARK THIS QUESTION**

| ASSESSMENT CRITERIA | MARKS | LM |
|------------------------------|-----------|----|
| Foundation | 1 | |
| NGL | 1 | |
| Bearer | 1 | |
| Ant guard | 1 | |
| DPC | 1 | |
| Floorboards | 1 | |
| Floor joists | 1 | |
| Quadrant | 1 | |
| Skirting | 1 | |
| Plaster | 1 | |
| Wall superstructure | 1 | |
| Wall plate | 1 | |
| Airbrick | 1 | |
| Foundation wall | 1 | |
| Hatching wall | 1 | |
| Any TWO labels | 2 | |
| Application of scale | | |
| One or two incorrect = 3 | | |
| Three or four incorrect = 2 | | |
| More than five incorrect = 1 | | |
| No measurement correct = 0 | 3 | |
| TOTAL | 20 | |

[40]