These marking guidelines consist of 18 pages.
QUESTION 1: OHSA, MATERIALS, TOOLS, EQUIPMENT AND JOINING (GENERIC)

1.1

1.1.1 F ✓ (1)
1.1.2 A ✓ (1)
1.1.3 G ✓ (1)
1.1.4 E ✓ (1)
1.1.5 B ✓ (1)

1.2

• Do not throw any tools or materials from a scaffold. ✓
• Never jump on to and off a scaffold. ✓
• Never overload a scaffold.
• Remove or cover sharp edges or corners.
• Always attach free-standing scaffoldings to a building.
• Use a ladder to get on and off a scaffold.
• Keep free of waste or any other obstruction.
• Never jump on a scaffold while working on it.
• Responsible/qualified person must ensure that scaffolding is safe, rigid, stable and firm or has no defects.
• Scaffold must be supplied with guard rails/toe boards.
• Scaffolds must be levelled on uneven ground.
• Do not work on a scaffold in bad weather.
• Wear a safety harness when working on scaffolding.
• Do not throw tools on/off a scaffold.

ANY TWO OF THE ABOVE (2)

1.3

• It prevents workers from falling off the scaffold. ✓
• It is used as a handrail. ✓
• It is used to strap on safety harnesses.
• To protect the worker working on the scaffold.

ANY TWO OF THE ABOVE (2)

1.4

• The primary purpose of painting is to protect metals, wood and other material against corrosion and decay. ✓
• Provides a decorative/aesthetic appearance/finishing. ✓
• Protects surfaces from moisture penetration.
• Protects surfaces from rust/uv rays.

ANY TWO OF THE ABOVE (2)
1.5 The curing of concrete:
- Increases the strength of concrete. ✓
- Decreases the permeability of hardened concrete.
- Improves durability of concrete by reducing cracks.
- Makes concrete more watertight.
- Minimises shrinkage cracks in concrete.
- Provides volume stability.
- Cured concrete can carry more weight without breaking/crumbling than uncured concrete.
- Prevents rapid drying of concrete.
- Curing ensures that the hydration process continues.

ANY ONE OF THE ABOVE

(1)

1.6

1.6.1 Multi detector ✓

(1)

1.6.2 Tool A is used:
- to detect materials found in/behind walls, ceilings and underneath floors, including ferrous and non-ferrous metals, electrical wiring, wood and metal studs. ✓
- to locate steel bars and copper pipes. ✓
- in carpentry, plumbing, and construction.
- to measure the distance to/from covered objects.

ANY TWO OF THE ABOVE

(2)

1.6.3 The batteries must be removed from the tool:
- to prevent the battery from running flat/battery can die. ✓
- to prevent acid leaks from batteries damaging the tool.

ANY ONE OF THE ABOVE

(1)

1.7

1.7.1 A – Bolt and nut/Bolt ✓
    B – Rawl bolt ✓

(2)

1.7.2 Bolt and nut
- Bolts and nuts are used to secure pipe supports to metal parts. ✓
- To join components together.

Rawl bolt
- A Rawl bolt is used to fix a truss hanger to a wall. ✓
- To fix brackets/structures/panels to a wall/concrete.
- For construction, renovation and industrial work

ANY TWO OF THE ABOVE

(2)
QUESTION 2: GRAPHICS AS METHOD OF COMMUNICATION (GENERIC)

ANSWER SHEET 2

<table>
<thead>
<tr>
<th>NO.</th>
<th>QUESTIONS</th>
<th>ANSWERS</th>
<th>MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identify FIGURE A.</td>
<td>South Elevation/Elevation ✓</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Identify FIGURE B.</td>
<td>Ground floor plan/floorplan ✓</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Identify number 4.</td>
<td>First floor level/Second floor level/Suspended floor/Floor level/ dash line/ FFL/Expansion joint ✓</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Identify number 5.</td>
<td>Window Sill ✓</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Identify number 9.</td>
<td>Hand wash basin/Wash basin/Washing basin/HWB/basin ✓</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Identify number 10.</td>
<td>Water closet/WC/Toilet pan ✓</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Identify number 11.</td>
<td>Bath/B ✓</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>On what date was the plan printed?</td>
<td>2018/10/02 ✓</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Who drew the building plan?</td>
<td>JP Maloi ✓</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Name the feature in the column for the notes in FIGURE 2 that must be installed in front of the sliding door.</td>
<td>Ramp ✓</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Name the feature in the column for the notes in FIGURE 2 that must give access to the first floor.</td>
<td>Staircase/Stairs/Stairway ✓</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Identify the type of roof that is used for the building in FIGURE A.</td>
<td>Gable roof ✓</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Explain the purpose of number 1.</td>
<td>To cover the opening/close the gap between the two slopes of the roof. ✓ Prevent water and other elements from entering the roof. ANY ONE OF THE ABOVE</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| 14 | Explain the purpose of number 2. | • To prevent water from falling onto the ground ✓  
• To collect rainwater  
• To channel the rainwater into the downpipe  
• To protect the wall from water  
• To hide the rafters/finish off the roof  
ANY ONE OF THE ABOVE |
| 15 | Explain the abbreviation FFL at number 6. | Finished floor level ✓ |
| 16 | Explain the purpose of number 7. | To channel the water from the gutter to the ground. ✓ |
| 17 | Explain the meaning of the arrow on the feature that must be installed in front of the sliding door. | It indicates the direction of the slope of the ramp/it indicates the slope. ✓ |
| 18 | Explain what is meant by 1:10 indicated on the symbol in the notes. | It indicates the slope or the gradient of the ramp/for every 10 metres horizontally rises 1 metre vertically. ✓ |
| 19 | Which room will feature 15 serve? | The bathroom. ✓ |
| 20 | Explain the short dash lines on the windows. | • Indicates what direction the window is opening/window opening. ✓  
• Indicates the location of the hinges.  
• Indicates the location of the casement stay.  
ANY ONE OF THE ABOVE |
<p>| 21 | Deduce the height of window 2 from the window schedule. | 1,2 m or 1 200 mm ✓ (Ignore units) |
| 22 | Deduce the width of window 3 from the window schedule. | 2 m or 2 000 mm ✓ (Ignore units) |
| 23 | On what elevation of the building is the bathroom window situated? | Western elevation/Western side ✓ |</p>
<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Differentiate between component number 3 and component number 8.</td>
<td>3 – window/window frame/reveal frame stile/casement stile ✓</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 – sliding door /door frame/ door/reveal /sliding door stile ✓</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Differentiate between the light in the lounge and the light in the bathroom.</td>
<td>The light in the lounge is a fluorescent light/1 x 40W/2x40/3x40 fluorescent light ✓ and the light in the bathroom is a normal ceiling light ✓</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>Recommend a suitable floor covering for the bathroom.</td>
<td>Tile/ Vinyl flooring (Novilon)/ Coloured screed/Polished or stained concrete flooring/Water proof laminated floor/carpet. ✓</td>
<td>1</td>
</tr>
<tr>
<td>27</td>
<td>Recommend an appropriate scale to which FIGURE A should be drawn, according to SANS.</td>
<td>1:50/100/200 ✓</td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>Recommend an alternative sanitary fitment to replace number 11 that will serve a similar purpose.</td>
<td>Shower ✓</td>
<td>1</td>
</tr>
<tr>
<td>29</td>
<td>Calculate the internal area of the office in m² Show ALL calculations.</td>
<td>4 m ✓ x 3 m ✓ = 12 m² ✓ OR 12 4 000 ✓ X 3 000 ✓ = 12 000 000mm²</td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td>Calculate the perimeter of the building. Show ALL calculations.</td>
<td>Positive marking&lt;br&gt;(220 + 3 000 + 110 + 2 800 + 220) ✓ x 2 ✓ = 6 350 x 2 =12 700 mm ✓ (220 + 4 000 + 110 + 2 000 + 220) ✓ x 2 ✓ = 6 550 x 2 = 13 100 mm ✓ 12 700 + 13 100 mm = 25 800 mm ✓ OR = 25,8 m</td>
<td>7</td>
</tr>
</tbody>
</table>

**TOTAL** 40
QUESTION 3: ROOFS, STAIRCASES AND JOINING (SPECIFIC)

3.1  5°/10/30° ✓

3.2  1 400 mm ✓

3.3

(Square) Batten
(Rectangular) Purlin

ANY ONE OF THE ABOVE

3.4  50 mm x 76 mm/ 76 mm x 50 mm ✓ OR 76 mm x 76 mm

3.5

<table>
<thead>
<tr>
<th>Clay roof tiles</th>
<th>Fibre cement tiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>650 mm/closer together ✓</td>
<td>760 mm/ further apart ✓</td>
</tr>
</tbody>
</table>

3.6  A - Ridge capping/Ridge plate/Roof capping ✓
     B - Roof covering/Corrugated iron roof/IBR iron roof/roof sheeting ✓
     C - Gang nail/Nail plate/Connector plate/Joining piece ✓
     D - King post ✓
3.7

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>MARK</th>
<th>CANDIDATE'S MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walls</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Wall plates (Wrong position – 1 mark)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Rafters</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Collar beam/Collar tie</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ridge beam correctly drawn</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>8</strong></td>
<td></td>
</tr>
</tbody>
</table>

3.8

3.8.1 Risers ✓ (1)
3.8.2 Balusters ✓ (1)
3.8.3 Going/Tread ✓ (1)
3.8.4 Landing ✓ (1)
3.8.5 Run ✓ (1)

3.9

ANY TWO OF THE ABOVE OR ANY OTHER SHAPE RESEMBLING A SQUARE OR ROUND SHAPE/ 2 AND 3 DIMENSIONAL DRAWINGS ACCEPTABLE (2)
3.10
- Screwed on to the face of the wall.
- By means of a bracket.
- Fixed to face of wall using Rawl bolts or sleeved anchors by means of a bracket.

ANY ONE OF THE ABOVE  (1)

3.11
- Timber that is bolted to the top of the wall.
- Nailed or screwed to the wall.
- A galvanised strap/hoop iron nailed or built into the wall.
- Tie with roof wire built into wall.

ANY TWO OF THE ABOVE  (2)

3.12
- Supports the steel and withstands the loads.
- The pin serves as a pivoting point to adjust the angle or to lower the steel section.
- The pin can be removed to separate the steel section from the base.
- To keep the steel section attached to the base plate/concrete base.

ANY ONE OF THE ABOVE  (1)  [30]
QUESTION 4: EXCAVATIONS, FORMWORK, TOOLS AND EQUIPMENT AND MATERIALS (SPECIFIC)

4.1

1. C ✓
2. D ✓
3. F ✓
4. E ✓
5. A ✓

4.2

1. Keep excavated soil away from edge at least 600 mm. ✓
2. Identify any equipment that will affect trench stability. ✓
3. Trenches should be inspected at the start of each shift. ✓
4. Trenches should be inspected after a rain storm.
5. No worker will be allowed to work or move in trenches deeper then 1,5 metres if the sides are not protected by formwork or braced.
6. Test for atmospheric hazards (low oxygen, hazardous fumes and toxic gases) when trenches are more than 1,3 metres deep.
7. No load vehicle or plant equipment should be used, placed driven or used on or near the edge of any excavation where it is likely to cause a collapse and endanger workers lives.
8. A warning system for mobile equipment should be provided.
9. Always protect workers from loose rock or soil that could fall or roll from an excavation by installing protective barricades at appropriate intervals.
10. Prohibit workers from working on faces of slopes or benched excavations at levels above other workers, unless workers at a lower level is protected against hazards of falling or sliding material or equipment.
11. Members/parts of the support system (formwork or shuttering) should be securely connected to prevent sliding, falling material.
12. Avoid overloading members of support systems.
13. Formwork/shuttering should be removed in a manner that will protect workers from cave-ins.
14. Before temporary removal of individual formwork members/parts, additional precautions should be in place, installing other structural members.
15. Backfilling should always progress with the removal of the support system (formwork from the excavation).
16. The area should be cordoned off and warning signs must be posted and must be clearly visible.
17. Cover the entire work area after hours, especially if children might gain entry to the site.
18. A suitable barrier(fence) must be provided where any excavation is more than 2 metres deep.
19. Excavation sites should be well lit at night.
20. Red warning lights should be placed strategically to warn the public.
21. Workers should not work under suspended or raised loads of materials.
22. Always start dismantling the formwork from the bottom of the formwork.
23. Never work alone in deep excavations.

ANY THREE OF THE ABOVE
4.2.2

- The site must be levelled. ✓
- The site must be cleared properly, and all loose soil must be removed. ✓
- A baseline must be established. ✓

4.3

A baseline must be established.

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>MARK</th>
<th>CANDIDATE'S MARK</th>
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</thead>
<tbody>
<tr>
<td>Folding wedges</td>
<td>1</td>
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</tr>
<tr>
<td>Walling boards</td>
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</tr>
<tr>
<td>Poling boards</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Struts</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Shuttering correctly drawn</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Any TWO labels</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>8</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.4

Good formwork should be:

- made accurately to the dimensions. ✓
- stable enough to bear the load of wet concrete.
- bear the mass of workers on it.
- able to withstand the vibrating and tamping of concrete.
- strong enough to provide enough support, without too much deflection, until the concrete has set and cured.
- easy to repair on site.
- secured with wire nails so that it can be easily dismantled.
- secured with bolts and nuts ranging from 13 mm to 19 mm in diameter.
- should be sealed properly.
- should be free of dirt such as saw dust.
- quick and simple to erect to ensure the correct cover depth for the reinforcing.
- removed only when concrete has cured.
- close-fittings along seams and joints.
- made of recyclable components.
- fitted with plywood laggings for a smooth finish.
- ensure the correct cover depth for the reinforcing in order to prevent structural failure.
- sealed properly so that the concrete does not leak and form a honeycomb effect.

**ANY ONE OF THE ABOVE**

(1)
4.5

4.5.1 Beam formwork/Formwork for beams

4.5.2 A - Tie 50 mm x 25 mm at 600 mm centres
B - Cleat 76 mm x 50 mm
C - Fixing plate/Kicker plate 76 mm x 50 mm
D - Brace/Strut 76 mm x 25 mm

4.5.3 • The shape of folding wedges simplifies the erecting and dismantling of formwork.
• Folding wedges can easily be removed by knocking one away from the other.
• Folding wedges help to keep formwork components sturdy/secure/stable.
• Folding wedges play an important role in the levelling of formwork for beams, floor slabs and columns.
• Folding wedges facilitate the raising or lowering of the formwork to the required height.
• Folding wedges are used as pins to strengthen adjoining concrete formwork

ANY ONE OF THE ABOVE

4.6

• Sturdy/Rigid enough to bear the mass of wet concrete without collapsing.
• Stronger than wood and timber board products.
• Easily removed when the concrete has set.
• Not as adaptable as timber shuttering.
• More expensive than timber.
• Will last longer than timber.
• Can be used repeatedly.
• Tight along the seams and joints so that concrete does not leak.
• It’s prone to rust.

ANY TWO OF THE ABOVE

4.7

4.7.1 • Operate with care and wear appropriate personal protective equipment.
• Check the controls for proper response before use.
• Check the condition of the machine at the start and end of each shift.
• Never use a faulty machine.
• Never lay the machine on its side.
• Do not allow the vibrating pipe to make contact with any part of the body or formwork.
• Switch of the machine when it is left unattended.
• Long use of the machine exposes the operator to vibrations. Stop if you feel numbness.
• Switch off the machine and wait for all moving parts to stop before adjusting, repairing, inspecting or cleaning it.
• Must be operated by a qualified person.
4.7.2 • Maintain like all machinery. Lubricate and adjust according to the manufacturer’s instruction.
• Clean after use and store in a safe dry place.
• Service the concrete vibrator regularly.
• Repair or replace damaged electric cords.

4.8 • Service the tamping rammer/plate compactor regularly.
• Remove loose dirt and soil after use.
• Maintain like all machinery, lubricate and adjust according to the manufacturers instruction.
• Clean after use.
• Store in a safe dry place.
• Ensure that all parts are firmly attached to the machine.
• Repair or replace damaged electric cords.

4.9 Ready-mix concrete:
• is very expensive.
• delivery and pouring delays may affect the quality of the concrete.
• site batching in residential areas raises concerns about noise levels
• must be poured within a specified time.
• trucks may damage or soil house frontages and sidewalks.
• contaminations of storm-water drains.

4.10 The purpose of the slump test:
• is to test the density of the concrete before it is placed by determining the percentage of water it contains.
• Is to determine the workability and consistency of the batches that are mixed.
• To determine the slump of the mixture.

4.11 • Water – hosepipe or continuous spraying
• Water- retaining substances, such as damp sand, damp sacking, straw, hessian and canvas.
• Plastic membranes and plastic sheeting
• Chemical curing products

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QUESTION 5: PLASTER AND SCREED, BRICKWORK AND GRAPHICS AS MEANS OF COMMUNICATION (SPECIFIC)

5.1

5.1.1 A - Wet the wall thoroughly ✓
B - Apply plaster ✓
C - Scrape the plaster to obtain a flat surface/levelling ✓
D - Float to smooth the surface ✓

(4)

5.1.2 Straight edge ✓

(1)

5.2

LEFT VIEW INCORRECTLY DRAWN -1

<table>
<thead>
<tr>
<th>CRITERIA ASSESSMENT</th>
<th>MARK</th>
<th>CANDIDATE'S MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full bricks and ½ brick every alternate course on front view</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Left view full brick every course</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Left view ¼ brick every course</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

5.3

5.3.1 A- Herring bone paving pattern ✓
B- Basket-weave paving pattern ✓

(2)

5.3.2 • Dry-laid or sand-set ✓
• Bitumen-set
• Mortar-set

ANY ONE OF THE ABOVE

(1)

5.3.3 • River/Plaster sand is used to grout between paving bricks.
• Sand mixed with cement is used to grout between paving bricks ✓

ANY ONE OF THE ABOVE

(1)
5.4

NOT DRAWN TO SCALE

USE A MASK TO MARK THIS QUESTION ACCEPT ANY ANGLE BETWEEN 30° AND 45°.

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>MARK</th>
<th>CANDIDATE'S MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall: 220 mm wide face brick</td>
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<tr>
<td>Beam filling</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Wall plate 114 mm x 38 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Tie beam 114 mm x 38 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Rafter 114 mm x 38 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Purlins 76 mm x 50 mm</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Corrugated iron roof covering</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fascia board 230 mm x 38 mm</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Any TWO labels</td>
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<td></td>
</tr>
<tr>
<td>Print the scale below the drawing</td>
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<td></td>
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<tr>
<td>Application of scale</td>
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<tr>
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<td>3</td>
</tr>
<tr>
<td>Three or four incorrect</td>
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<tr>
<td>More than five incorrect</td>
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<td>No measurement correct</td>
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<tr>
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<td>(15)</td>
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</tbody>
</table>

SCALE: 1:10

APPLICATION OF SCALE

[30]
QUESTION 6: REINFORCEMENT IN CONCRETE, FOUNDATIONS, CONCRETE FLOOR AND Quantities (SPECIFIC)

6.1

6.1.1 B ✓ (1)
6.1.2 D ✓ (1)
6.1.3 D ✓ (1)
6.1.4 B ✓ (1)
6.1.5 A ✓ (1)

6.2

Minimum concrete cover
Stirrups ✓
Main bars ✓
Proportion ✓

<table>
<thead>
<tr>
<th>ASSESSMENT CRITERIA</th>
<th>MARK</th>
<th>CANDIDATE’S MARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8 Main bars</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Binders/Stirrups</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Min concrete cover</td>
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<td></td>
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<tr>
<td>Any TWO Labels</td>
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<tr>
<td>Proportion</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td></td>
</tr>
</tbody>
</table>
6.3 Pile foundations:
- can be used in poor/unstable/soft/loose soil. ✓
- can be used anywhere even in water. ✓
- the larger base ensures stability. ✓
- is relatively quick to install if the equipment is available.
- where pre-fabricated piles are used, much time is saved.
- resists tensile stress well.
- is quick and less expensive to produce.
- can be manufactured and transported elsewhere.
- can be installed in poor weather conditions.
- the length can easily be adjusted.
- offers good resistance against moving soil.

ANY THREE OF THE ABOVE (3)

6.4 Metal pipes that contain a dry concrete mix (gravel plug) are driven into a drilled hole in the ground. ✓
- The pipe is held firmly in position while a drop hammer is used to drive the pre-filled dry concrete mix (gravel plug) out of the pipe to form an extended base (toe) at the bottom of the hole. ✓
- Concrete is now poured into the pipe and compacted, using an internal drop hammer, until the pipe is filled to the top. ✓
- The steel pipe is slowly extracted as the concrete is poured into the pipe.

ANY THREE OF THE ABOVE (3)

6.5 6.5.1 Hollow-core concrete block/Concrete block/Block ✓ (1)
6.5.2 • Used for the placement of the conduit pipes. ✓
- Serves as insulation.
- Reduce the weight.

ANY ONE OF THE ABOVE (1)

6.5.3 Reinforced ribs/Ribs/Pre-stressed concrete ribs ✓ (1)
6.5.4 • Ribs (pre-stressed reinforced ribs) ✓
- Hollow-core blocks (polystyrene blocks can also be used) ✓
- Steel mat/Mesh/Steel/Reinforcement ✓
- In-situ cast concrete/Concrete
- Spacers

ANY THREE OF THE ABOVE (3)
6.5.5 After the installation of a rib-and-block floor:
- Ensure that the correct curing procedure is followed for 7 days to ensure a well-set slab. ✓
- allow 28 days for setting of the concrete slab.
- temporary props can be removed after the concrete slab has reached a crushing strength of 17 MPa.

**ANY ONE OF THE ABOVE**

6.5.6
- Because the units are precast, mechanical handling is required on site. ✓
- The placing of the blocks between the ribs requires manual labour. ✓

### 6.6

**ANSWER SHEET 6.6**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Skirting: Inside length of building</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 8 000 mm – 440 mm ✓ OR – 2(220)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 7 560 mm ✓</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Skirting: Inside width of the building</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 5 000 mm – 440 mm ✓ OR – 2(220)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 4 560 mm ✓</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total length = 7 560 + 4 560 x 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 12,12 x 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 24,24 ✓ meter skirting needed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– 0,900 m for the door.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 23,34 m ✓</td>
<td>(2)</td>
</tr>
<tr>
<td>1/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,56 ✓</td>
<td></td>
<td><strong>Screed: Inside area of building</strong></td>
<td></td>
</tr>
<tr>
<td>4,56 ✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0,025 ✓</td>
<td>0,86 m³ ✓</td>
<td>= 0,86 m³ screed is needed</td>
<td>(4)</td>
</tr>
</tbody>
</table>

(10) [40]  
**TOTAL:** 200