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Helping You get it right

Name_____

BASIC SCAFFOLDING KNOWLEDGE QUESTIONS

THE PROFESSIONAL TRAINING SYSTEM

THE PROFESSIONAL TRAINING SYSTEM

Basic Scaffolding - Questions

SECTION ONE: CERTIFICATION

1. a) At what height is a scaffolding certificate of competency needed?

Where a person or object could fall more than 4m from the scaffolding.

1. b) Is a person with a Basic Scaffolding Certificate allowed to construct a cantilevered scaffold?

No

1. c) Is a person with a Basic Scaffolding Certificate allowed to construct a barrow ramp?

No

1. d) Is a person with a Basic Scaffolding Certificate allowed to construct a tower frame scaffold with outriggers?

Yes

1. e) Is a person with a Basic Scaffolding Certificate allowed to construct a tube and coupler scaffold?

No

1. f) Is a person with a Basic Scaffolding Certificate allowed to install a barrow hoist?

Yes

1. g) Is a person with a Basic Scaffolding Certificate allowed to construct a modular birdcage scaffold?

Yes

1. h) Is a person with a Basic Scaffolding Certificate allowed to construct a swing stage?

No

1. i) Is a person with a Basic Scaffolding Certificate allowed to install a safety net?

Yes

1. j) Is a person with a Basic Scaffolding Certificate allowed to erect a mast climber?

No

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1. k) Is a person with a Basic Scaffolding Certificate allowed to construct a mobile frame scaffold?

Yes

1. l) Is a person with a Basic Scaffolding Certificate allowed to install a personnel and materials hoist?

No

SECTION TWO: SITE HAZARDS

2. a) How close to live unprotected powerlines would you construct a metal scaffold?

4m (national guideline. Consult local supply authority for state regulations)

2. b) How far past each end of the scaffold should insulation on live powerlines extend?

4.9m (or 5m)

2. c) How can a scaffold built alongside a road be protected from traffic damage?

1. ***Re-route traffic***
2. ***Provide guards (or fenders)***
3. ***Use a person to direct traffic (or flagman)***

2. d) What could happen if the tie tubes on a scaffold stuck out too far when a crane is operating?

Crane loads could snag the scaffold

2. e) Name something which might corrode scaffolding equipment.

1. ***Acids***
2. ***Alkalis***
3. ***Salts***

2. f) What is the danger where a scaffold is being constructed close to machinery with moving parts?

Injury from machinery operation

2. g) What type of scaffolding material would you use to construct a scaffold where there may be a danger of explosion?

Non-conductive material (or timber)

SECTION THREE: TOOLS AND EQUIPMENT FOR SCAFFOLDING

3. a) How far above the maximum nut extension must the spindle of an adjustable baseplate extend?

150mm

3. b) What is the maximum extension on an adjustable baseplate?

600mm

3. c) What is the minimum size of a square baseplate?

150mm x 150mm (or 225cm2)

3. d) What is the minimum outside diameter of a common scaffold tube (to the nearest mm)?

48mm

3. e) What is the minimum wall thickness of a common steel scaffold tube?

4mm

3. f) What is the minimum wall thickness of a common heavy duty aluminium scaffold tube?

4.45mm (or 4.4mm or 4.5mm)

3. g) What is the minimum width of a scaffold plank?

220mm (or 225mm)

3. h) What is the minimum thickness of a hardwood solid timber scaffold plank?

32mm

3. i) What is the minimum thickness of an oregon solid timber scaffold plank?

38mm

3. j) What is the minimum diameter of fibre rope you would use for a handline?

12mm

3. k) What is the minimum diameter of fibre rope you would use for a gin wheel?

16mm

3. l) What is the maximum load you would lift with a gin wheel?

50kg

3. m) Would you use a gin wheel with no rope guides?

No

3. n) How far along an unbraced cantilevered scaffold tube would you fix a gin wheel?

600mm

3. o) How would you stop a ring-type gin wheel from sliding along the scaffold tube?

Fix a coupler on either side of the ring

3. p) Would you suspend a gin wheel from a right angle coupler?

No

3. q) What would you do to make safe a hook-type gin wheel with no safety catch?

Mouse the hook (wire up the open hook)

SECTION FOUR: GENERAL SCAFFOLD REQUIREMENTS

4. a) What is the maximum load in each bay of a light duty working platform?

225kg (or 2.2kN)

4. b) What is the maximum load in each bay of a medium duty working platform?

450kg (or 4.4kN)

4. c) What is the maximum load in each bay of a heavy duty working platform?

675kg (or 6.6kN)

4. d) What maximum load would you place on a right angle coupler?

630kg (or 630kgf or 6.25kN)

4. e) What maximum load would you place an adjustable baseplate?

3030kg (or 30kN, or 3030kgf. 3000kg or 3 t are acceptable approximations)

4. f) What is the maximum allowable load on a chain?

One sixth of the breaking load (or breaking strain or breaking force)

4. g) What is the maximum allowable load on a flexible steel wire rope?

One sixth of the breaking load (or breaking strain or breaking force)

4. h) When a scaffold is built on soil, what would you place under the baseplates to distribute the load?

Soleplates

4. i) What minimum width of timber would you use as a soleplate?

220mm (or 225mm, or the width of a scaffold plank)

4. j) Are gaps allowed between the planks of a working platform?

No

4. k) Can platform planks be lapped on the returns of a scaffold?

Yes

4. l) What is the minimum width of a light duty working platform?

450mm (or 2 planks)

4. m) What is the minimum width of a medium duty working platform?

900mm (or 4 planks)

4. n) What is the minimum width of a heavy duty working platform?

1000m (or 5 planks)

4. o) What is the minimum width of clear access along a working platform for persons with hand tools only?

450mm (or 2 planks)

4. p) What is the minimum width of clear access along a working platform for persons and materials?

675mm (or 3 planks)

4. q) Can planks with different thicknesses be used to deck out a working platform?

No

4. r) When is edge protection needed on working platforms?

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When a person or object could fall more than 2m

4. s) How far above the working platform must a toeboard extend?

150mm

4. t) At what height above the working platform would you fix a guardrail?

Not less than 900mm and not more than 1100mm (or any height between these two)

4. u) What must be provided between the guardrail and the toeboard to complete a platform's edge protection?

A midrail

4. v) What is the maximum gap allowed between an unprotected platform edge and the working face?

Less than 225mm (or 225mm or less than the width of a scaffold plank)

4. w) Is it acceptable to use a personnel hoist as the only means of access to a scaffold's working platforms?

No

4. x) What type of ladders cannot be used for access to a scaffold?

1. ***A domestic grade (or non-industrial grade) ladder***
2. ***An extension ladder***
3. ***A step ladder***

4. y) What is the maximum height allowed between ladder landings?

6m (or 3 lifts)

4. z) What is the minimum height an access ladder must extend above the landing?

900mm (or 1m)

SECTION FIVE: PARTICULAR SCAFFOLD REQUIREMENTS

5. a) Do castors for mobile scaffolds need wheel locks?

Yes

5. b) Can a castor for a mobile scaffold have a pneumatic tyre?

No

5. c) Why is plan bracing needed in a mobile scaffold?

To stop the scaffold from twisting (or distorting) when it is moved

5. d) What is the minimum platform width when platform brackets (hop ups) are fixed between lifts?

450mm (or 2 planks)

5. e) Would you fix platform brackets (hop ups) on the inside of the scaffold or on the outside of the scaffold?

The inside (or alongside the working face)

5. f) When platform brackets (hop ups) are fixed between lifts, where would you place the extra working platforms?

At the lift immediately above and the lift immediately below (or one star above or one star below)

5. g) What maximum spacing would you use between tank brackets supporting 50 mm thickness solid timber scaffold planks?

2m

5. h) What maximum spacing would you use between tank brackets supporting 63 mm thickness solid timber scaffold planks?

2.5m

5. i) **What would you do to stop the movement of planks** on a crane-lifted shutter bracket scaffold?

Positively fix (or lash, or strap, or spike) them

5. j) Should the design of a sheeted scaffold be checked by an engineer?

Yes

5. k) Would you use hessian to sheet a scaffold?

No

5. l) Does the supplier of prefabricated scaffolding need to provide written information about the system?

Yes

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5. m) Would you mix components of two prefabricated systems in the one scaffold without a supplier's or engineer's consent?

No

5. n) What maximum horizontal tie spacing would you use on an unsheeted modular scaffold?

3 bays (or 6 bays with plan bracing)

5. o) What maximum vertical tie spacing would you use on an unsheeted modular scaffold?

4m (or 2 lifts, or 8m with ledger bracing, or 4 lifts with ledger bracing)

5. p) If you used plan bracing to increase the tie spacings on a prefabricated scaffold, **how would you strengthen each tie?**

Fix check couplers (or additional couplers) to the tie tubes

5. q) If a tie tube was fixed to a wedge-type modular ledger, **how would you fix the ledger against uplift?**

Fix a check coupler (or additional coupler) over the wedge on the standard

5. r) Where would you fix the **first lift** on a modular scaffold?

At the standards lowest connection points (or at the base of the standards)

5. s) **How many unbraced panels would you allow between the longitudinally braced panels** of an unsheeted modular scaffold?

3

5. t) **Where would you fix transverse braces** to a run of unsheeted modular scaffold?

At each end (or in each lift at each end)

5. u) How high would you build an unsheeted free-standing steel frame scaffold?

Three times the least base width

5. v) Without supplier's information or engineer's approval, how high would you build a light duty aluminium tower frame scaffold?

9m

5. w) Would you fix the ladder access to a tower frame scaffold internally or externally?

Internally (or within the framework)

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5. x) How is the ladder opening in a tower frame scaffold's working platform usually protected?

With a trapdoor (or hinged hatch)

5. y) Without supplier's information or engineer's approval, how many working platforms would you place on a light duty aluminium tower frame scaffold?

One

SECTION SIX: ASSOCIATED EQUIPMENT REQUIREMENTS

6. a) What is the maximum mesh size of a safety net?

100mm

6. b) What maximum gap would you allow between the edge of a safety net and the building or structure?

200mm

6. c) What are the two maximum fall distances which you might find marked on the label of a safety net?

1m and 6m

6. d) What minimum and maximum initial sag would you allow for a safety net?

¼ and 1/5 of the shortest side length

6. e) What minimum clearance would you ensure below a safety net?

2/3 of the shortest side length or 2m, whichever is greater

6. f) What minimum horizontal distance should an outrigged safety net extend past the outermost working position?

2/5 of the maximum fall height plus 2m

6. g) What maximum spacing would you use between ties along the border chord of a safety net?

750mm

6. h) What is the minimum overrun distance between the hoist rope attachment and the head sheave on a cantilevered platform hoist?

1.5m

6. i) What is the minimum and maximum horizontal clearance between the moving platform of a cantilevered hoist and any landing or floor?

25mm and 100mm

6. j) What is the minimum height of a landing gate for a cantilevered platform hoist?

1.8m

6. k) What maximum distance would you use between lateral braces of a cantilevered platform hoist?

6m

6. l) How high would you free-stand the tower of a cantilevered platform hoist above its last tie?

3m