

Name: _____

Date: _____

Average time frame to complete exam: 1 hour 20 minutes

WORKING AT HEIGHTS

EXAM

For unit: RIIWHS204E Work safely at heights

This course will include a combination of theory and hands-on practical skills development.

Details of the unit can be viewed at this link:

<https://training.gov.au/Training/Details/RIIWHS204E>

Fall protection PPE is very important.

The type of PPE you have will significantly impact your range of options for setting up systems, and the ease with which you can work at height.

You need to discuss if your employer is supplying your PPE or if the PPE will be supplied by your instructor for the duration of training.

NOTE:

This exam must be completed in electronic format (no printed hard copies).

Please ensure that you can open, read, and sign Adobe Acrobat pdf files.

Legislation

- Q1. All WHS legislation has the essentially the same approach in each Australian State/Territory and states the following:

Extract from section 78 of the WHS REGULATIONS:

A person conducting a business or undertaking at a workplace must manage risks to health and safety associated with a fall by a person from one level to another that is reasonably likely to cause injury to the person or any other person.

The 2 key phrases contained in the legislation are:

1. From one level to another; and
2. Reasonably likely to cause injury.

What is meant by “Reasonably likely?” Choose the answer you think is correct (one answer only):

- ☐ A A lawyer could twist the phrase ‘reasonably likely’ to mean anything. The best option is to ban all work at height at a workplace – then you can’t get into trouble.
- ☐ B It means if you don’t take precautions against every type of slip, trip, and fall, you’ll automatically be held liable and face jail time.
- ☐ C The chance of injury is not so improbable that a reasonable person would ignore it – the risk is one that is fair, sufficient, or worth noting.
- ☐ D The law states that it is a chance somewhere between nil and certainty.
- ☐ E None of the above are correct.

- Q2. WHS Legislation states that risks associated with a fall can also occur in the vicinity of an edge, trench, or open penetration.

What is meant by the word ‘vicinity?’ Choose the most correct answer (one answer only).

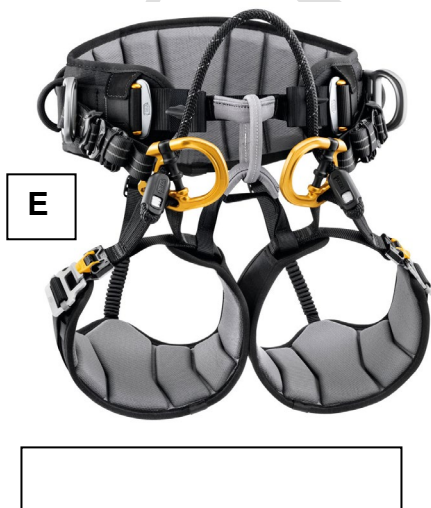
- ☐ A 1.0m from any exposed edge.
- ☐ B 2.0m from any exposed edge – assuming that the surface is flat, even, and solid.
- ☐ C 2.4m from any exposed edge.
- ☐ D 3.0m from any exposed edge.
- ☐ E The word ‘vicinity’ is not defined in the legislation, and so it would be tested in a court of law. Employers are advised to be cautious in setting approach limits to exposed edges (taking a range of factors into consideration).
- ☐ F The word ‘vicinity’ is meaningless because it doesn’t take slope (pitch angle) into consideration, or if the ground is slippery. The law is therefore wrong.
- ☐ G Legislators actually intend the law to mean there is no safe distance from any exposed edge – even if you are standing 20m away, there is still a risk.

- Q3. Would an open hole in the ground (eg a deep shaft) also be deemed ‘working at height’? For example, you are working next to a deep open hole in the ground – but you are standing at the Earth’s surface.

☐ Yes ☐ No

PPE

Q4. Study the photos carefully. For each harness, describe the type of work at height it is designed for (or intended for).



Q5. What is the *maximum theoretical lifespan* of a harness and lanyard? _____

Q6. Study the photos carefully. Each photo shows an inspection tag placed on a harness. Choose the photo you believe indicates a safe position for a tag (there may be more than one answer). You will be required to explain your answer.

☐ A



☐ B



☐ C



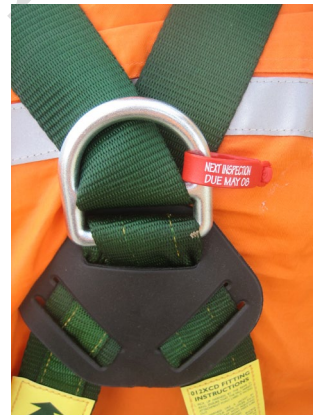
☐ D



☐ E



☐ F



☐ G



Q7. TRUE or FALSE

Inspection tags are required by law. For example, inspectors are required by law to affix an inspection tag to a harness after they have inspected it.

☐ True

☐ False

FALL PROTECTION SYSTEMS

Q8. Study the photos carefully. Choose the photo that shows the preferred method of using fall protection.

☐ A



What type of fall protection is this?

☐ B



What type of fall protection system is this?

☐ C



What type of fall protection system is this?

Explain your answer:

LANYARDS

- Q9. Study the photos carefully (ABC). All images are depicting single leg lanyards. Choose the lanyard design you think is most versatile for a range of work-at-height tasks. Justify your answer.

☐ A



☐ B



☐ C



Justify your answer:

- Q10. Study the photos carefully (ABC). All images are depicting dual leg (twin tail) lanyards. Choose the lanyard design you think is most versatile for a range of work-at-height tasks. Justify your answer.

☐ A



☐ B



☐ C



Justify your answer:

Q11. Study the photos carefully. Which design would be more suited for rescue intervention? Indicate your answer.

☐ A



☐ B



What do both lanyards have in common in terms of the way they operate?

Q12. Choose the photo that indicates the most correct way to use this type of lanyard. You will be required to explain your answer.

☐ A



☐ B



Explain why you think one orientation is preferred.

Q13. Study the photos carefully. Choose the photo you think is most correct.

☐ A



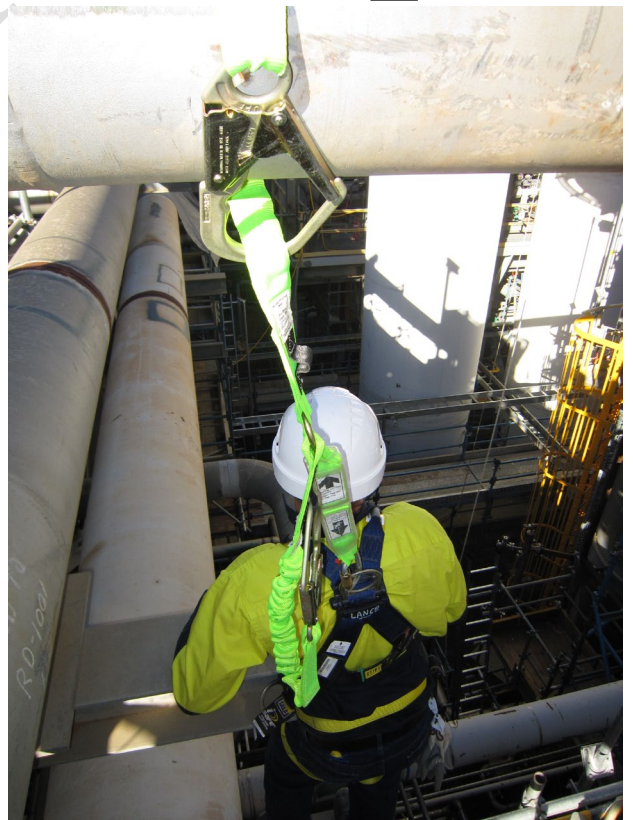
☐ B



☐ C

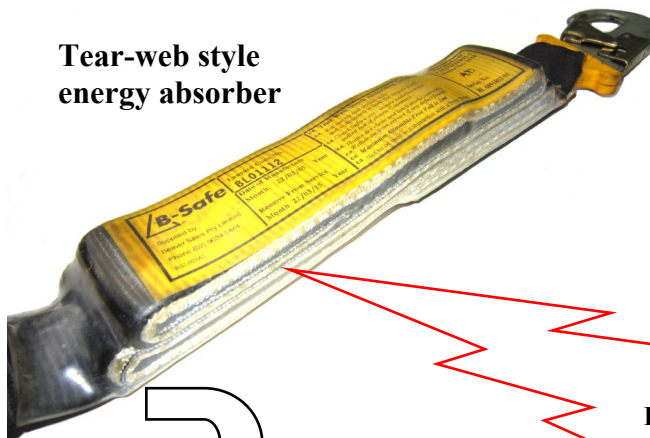


☐ D



Q14. Carefully study the photo and then answer the questions in the space provided:

Tear-web style energy absorber



Energy absorbers are designed to limit the peak force transmitted to the human body. What is that force (in kN)?

Can you re-use your lanyard after it has been activated by a fall? (can you re-pack it?)

☐ Yes ☐ No

How much will your lanyard increase in length if you free-fall? (assume the energy absorber activates).

Q15. Study the photos carefully. Choose the photo you believe indicates the most correct method of attaching a lanyard to a harness. You will be required to explain your answer.

☐ A



☐ B



Explain:

Working in a boom type EWP

Q16. Study the photos carefully. Choose the photo you think shows the *correct method* of working in a boom type EWP.



Explain your answer: Why is one photo wrong?

- Q17. Study the photos carefully. Each photo is showing a type of 'work platform'. Which 'platform' requires a worker to use fall protection (ie safety harness + lanyard)? Indicate your answer.

☐ A



☐ B



☐ C



Explain your answer: Why do you think fall protection is required? Give sound reasons.

- Q18. Study the photos carefully. Each photo is showing a fixed vertical ladder. When climbing these ladders, do you need to use fall protection PPE (ie harness + dual leg lanyard)? Indicate the fixed ladder that you think fall protection is required when climbing it.

☐ A



☐ B



Explain your answer:

Q19. Study the photos carefully. Choose the photo you think shows the *preferred* way to use fall protection in a boom type EWP. You will be asked to explain your answer.

☐ A



☐ B



☐ C



Explain:

?



Q20. Study the photos carefully. Indicate the photo that you think is the correct way to use a lanyard in a boom type EWP. Explain your answer.

☐ A



☐ B



Explain: Why would it matter which way a lanyard is oriented?

Q21. TRUE or FALSE

It is not permitted to attach a lanyard to the front of your harness when working in an EWP.

☐ True

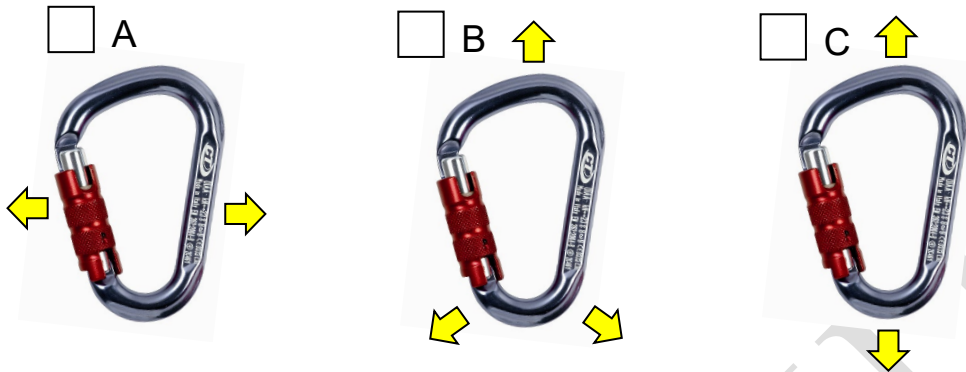
☐ False



Explain: (Justify your answer)

CONNECTORS

Q22. Study the diagrams carefully. Which of the diagrams indicates the correct loading profile for a carabiner?



Explain your answer: (what is the strongest part of a carabiner?)

--

Q23. The following question deals with load ratings stamped on carabiners and shackles. Indicate the correct answers below. Also indicate how the product is classified.

Carabiner



Shackle



What do the load ratings indicate?

☐	A. Average breaking load
☐	B. Ultimate strength
☐	C. Working load limit (WLL)
☐	D. Safe working load (SWL)

Type?

--

☐	A. Average breaking load
☐	B. Ultimate strength
☐	C. Working load limit (WLL)
☐	D. Safe working load (SWL)

Type?

--

Q24. Do carabiners have a maximum theoretical lifespan? ☐ Yes ☐ No

What factors would cause metal components to be retired from use? Explain:

--

Q25. Study the photos carefully.
Which lanyard connection is the most secure? Indicate your answer.

☐ A



☐ B



☐ C



☐ D



Would a swivel connector offer reasonable security? Are there advantages of swivel connectors compared to non-swivel connectors? Explain.

☐ Yes

☐ No



Explain:

ANCHORS

- Q26. How strong is your anchor required to be for working at height (for 1 person)?
Indicate your answer in kN (kilonewtons).

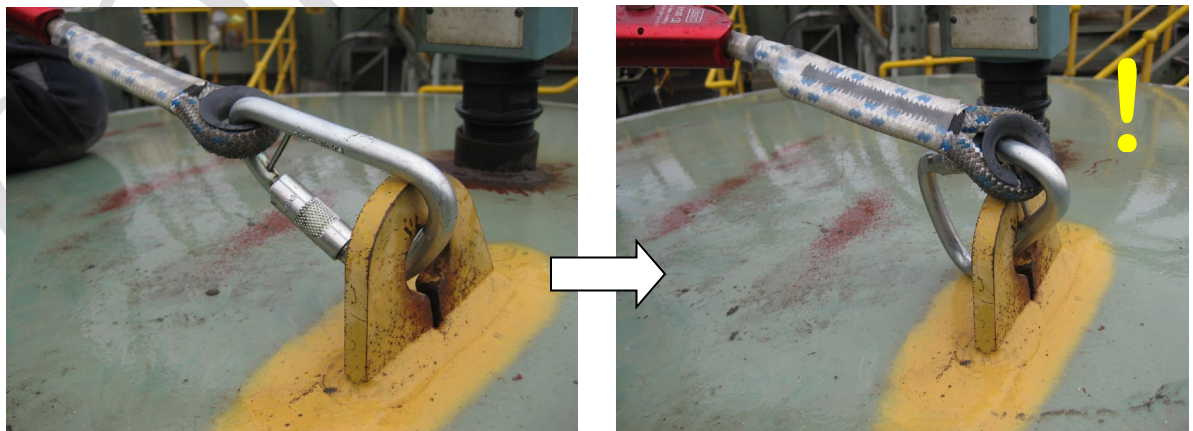
Note: Best practice is to assume that there is always the possibility of a fall, and that your anchor is capable of sustaining the load.



What if two (2) workers need to share the *same* anchor point?

How strong does the anchor need to be for 2 workers? _____

- Q27. Study the photos carefully. What has caused the misalignment? How could this issue be avoided? Explain.



Explain:

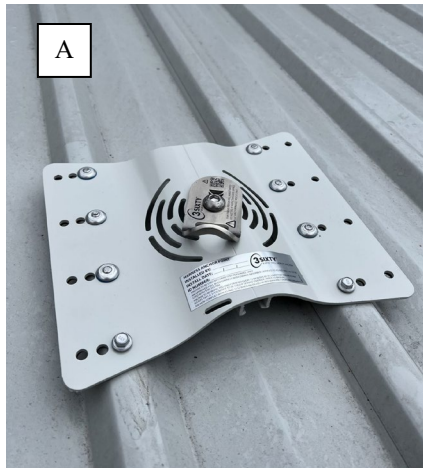
Q28. TRUE or FALSE.

This question is in relation to establishing a reliable anchor for working at height. In Australia, a worker is not permitted to create a temporary anchor point using a sling wrapped around structural steel. Only existing, permanently installed and tested anchor points are permitted.

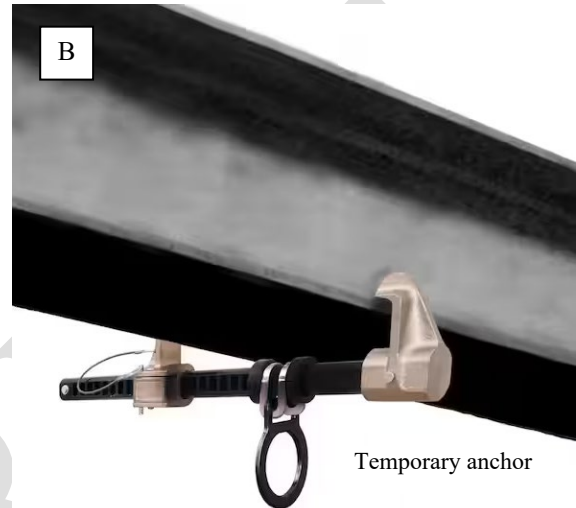
Note: For the purposes of answering the question, assume the worker is a trained, competent person.

☐ **True** Only existing, permanently installed and tested anchor points are permitted.

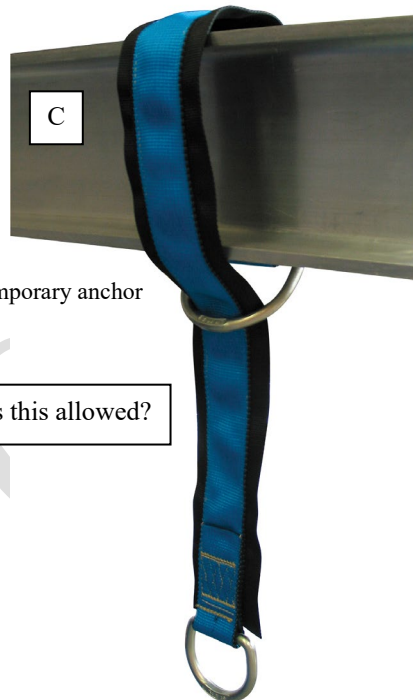
☐ **False** A worker is allowed to create a temporary anchor point using a sling wrapped around structural steel.



Permanent anchor

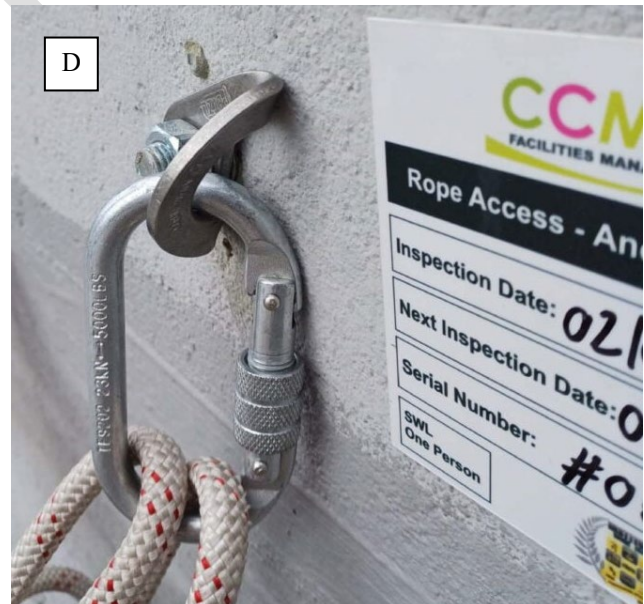


Temporary anchor



Temporary anchor

Is this allowed?



Permanent anchor

Explain:

Q29. Study the photo. Can you use a hand-rail as an anchor point? Indicate your answer.

☐ Yes

☐ No

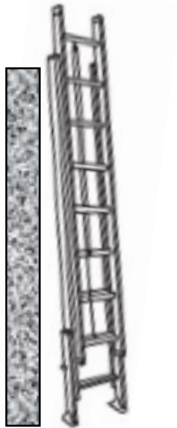


Explain:

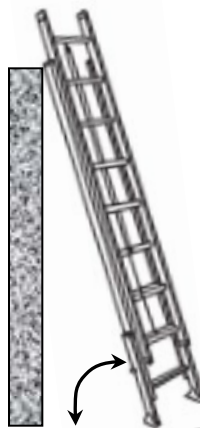
LADDERS

Q30. Choose the diagram that indicates the most correct angle for a portable ladder.

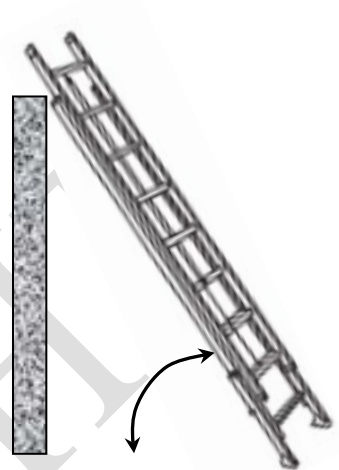
☐ A



☐ B



☐ C



There is a specific angle (with respect to the ground) that a ladder needs to be set to.

What is that angle? (in degrees)

Tradespeople often use a 'rule of thumb' to set their ladder to the correct angle. What is it? _____



Are you allowed to perform work while standing on a ladder?

☐ Yes ☐ No

Explain:

How far must the ladder extend above the step off point?

- Q31. Study the photos carefully.
You need to reach an overhead pipe to fix a leak.
Choose the ladder design you think is the safest option for reaching the pipe.
The job should only require about 10-15 minutes work.
Justify your answer.

☐ A



☐ B



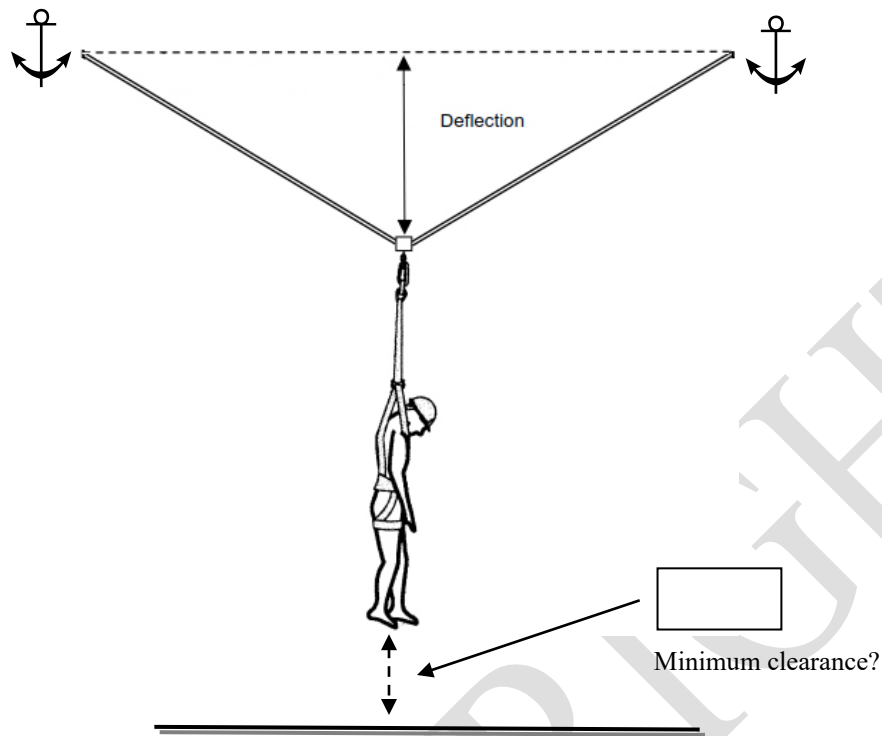
☐ C



Justify your answer:

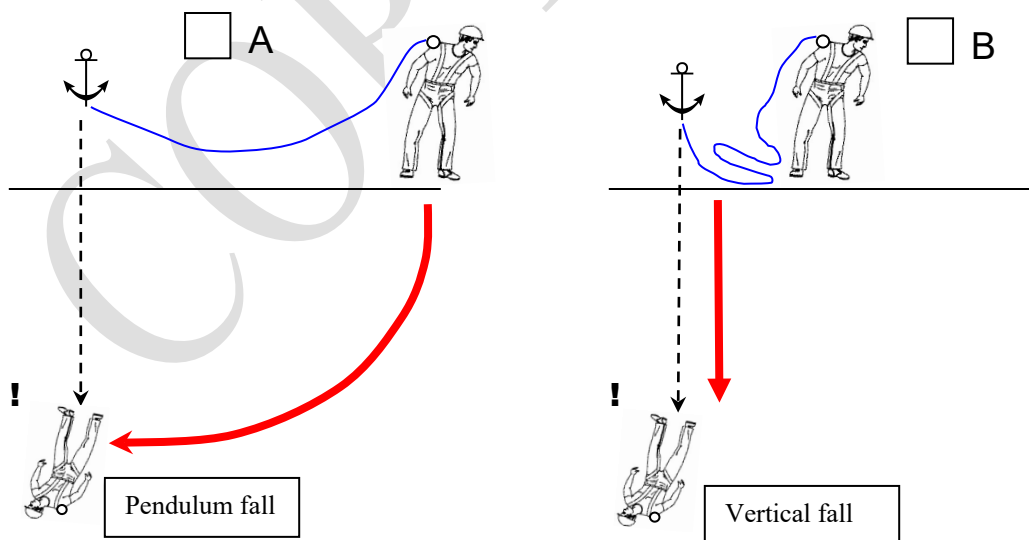
FALLS

Q32. What is minimum required clearance (post fall) for horizontal lifelines?



Q33. Which type of fall do you think is potentially more dangerous (A or B)? Indicate your answer.

Note: All falls are potentially dangerous but some types of falls can be worse than others!



- Q34. This question is about a post fall incident. How long can a person hang in a harness while waiting to be rescued? You must provide answer for conscious and unconscious persons.

NOTE:

Assume the harness in the photo is a typical mid-range 'vanilla' style with non-padded 45mm width belts/straps.



Time frame? CONSCIOUS PERSON

Time frame? UNCONSCIOUS PERSON

If you think there is a difference in time frames, explain why?

- Q35. Study the photo carefully, then answer the questions. Write your answers in the space provided.



What is the purpose of the stirrup?

What circumstances would prevent the use (deployment) of stirrups?

List 2 reasons.

1. _____

2. _____

Is it mandatory (compulsory) for deployable stirrups to be fitted to all industrial full body harnesses?

☐

Yes

☐

No

Q36. This question is about a safety rope. Which photo indicates a danger? Indicate your answer. You will be required to explain your answer.

☐ A



☐ B



Explain:

Q37. This question is about safety. You have set everything up and are about to commence work. However, before you begin working at height, you need to check your PPE and fall protection system using a checklist. What does each letter of the 'ABCDE' checklist represent?

A _____

B _____

C _____

D _____

E _____

FALLEN WORKER RETRIEVAL

Background info

Australian WHS regulations require emergency procedures (including rescue procedures) to be implemented whenever a fall-arrest system is used. In most States and Territories, this is found in clause 80 of the Regulation.

Q38. Study the photos carefully.

Virtually all fallen worker retrieval kits have the same general components labelled 'ABCD'. Identify each of the components and describe their purpose.



What is the purpose of 'A'?

What is the purpose of 'B'?

What is the purpose of 'C'?

What is the purpose of 'D'?

Q39. Why are these kits sold in a pre-configured format (little or no assembly required)?

Score _____

Student statement: *I declare that I completed this exam paper without the assistance of others. My answers represent my own work and not the work of someone else. I realise that I may owe a duty of care to others and that my knowledge and skill may be critical for working at height. I further acknowledge and accept that I must comply with WH&S legislation that applies at my workplace and there are severe penalties for non-compliance.*

Student signature: _____

Date: _____

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