

Student name: _____

Date: _____

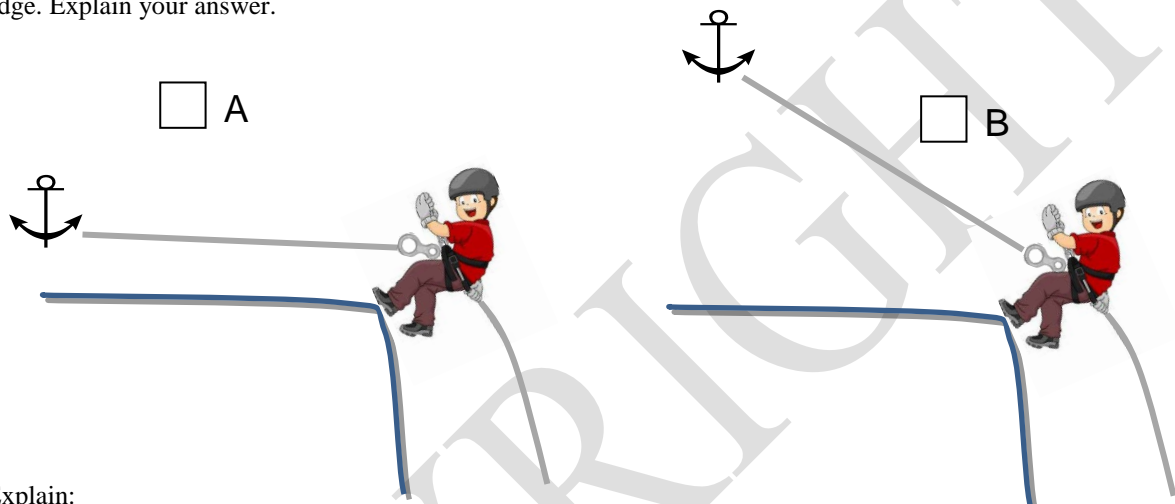
ABSEILING SKILLS DIAGNOSTIC EXAM**Time limit = 1 hour 15 min**

This exam is designed to identify any gaps that may exist in your knowledge. Missed exam questions may indicate that you require specific refresher training. Poor performance indicates that you are not yet ready to gain a qualification. Each missed exam question must be thoroughly reviewed until competency is achieved.

Carefully read each question then choose the most correct answer. This exam must be completed without assistance. You may have access to personal notes and reference material. You must write in permanent ink.

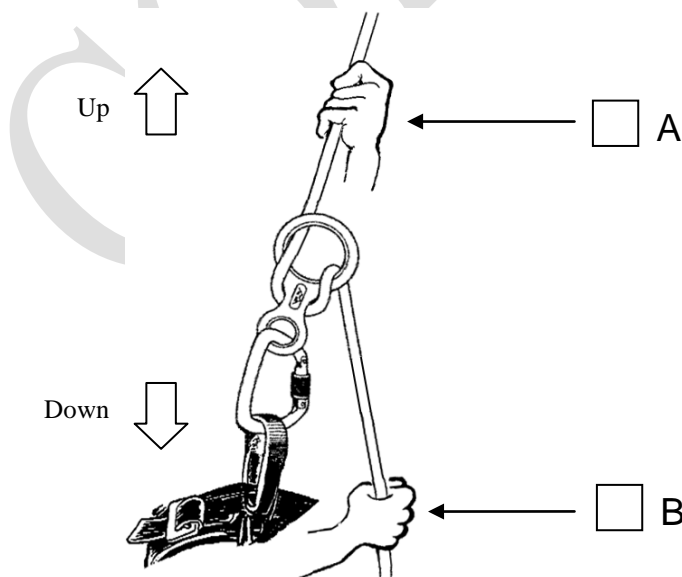
Competency can be demonstrated by initially scoring 100%

- Q1. Study the following diagrams carefully. Choose the setup (A or B) that would facilitate an easier descent over the edge. Explain your answer.



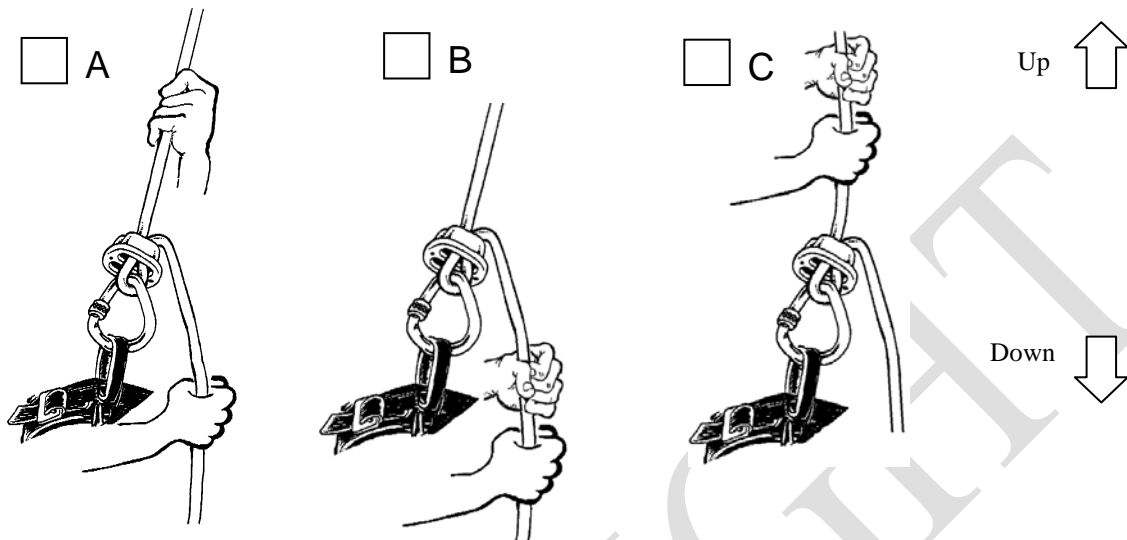
Explain:

- Q2. Study the diagram. It is a basic schematic of a person abseiling. Indicate which hand is the 'brake hand'. Select 'A' or 'B'. In your explanation, also comment about the other 'non brake' hand in terms of what role it is playing (if any).



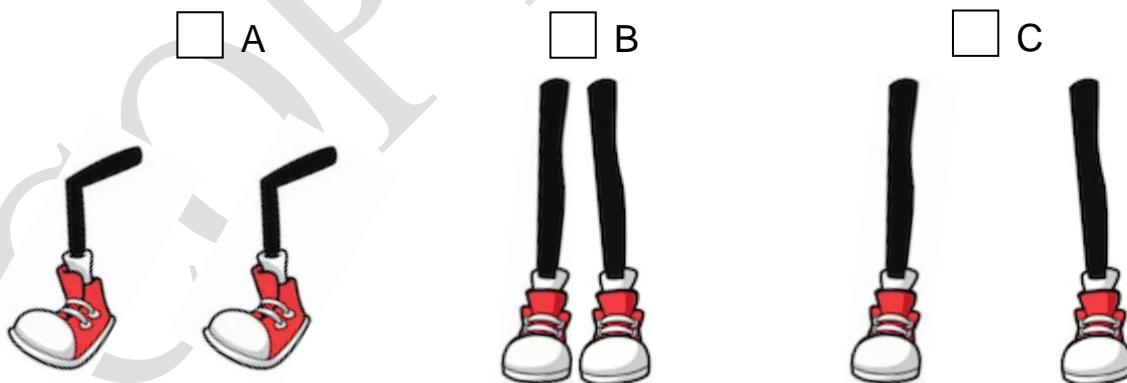
Explanation:

- Q3. Study the images carefully. Each image is showing a different way to hold the abseil rope. Choose the image you think is the optimal way of holding the abseil rope while descending. You will be required to explain your answer.
- NOTE: Up is to the top of page and down is to the bottom of the page.



Explain:

- Q4. Study the images carefully. What is the optimal arrangement of a persons feet when performing an abseil descent? Choose the image you believe is showing the optimal arrangement of a persons feet when abseiling – particularly while negotiating around an edge.



Explain your answer:

- Q5. What preventative measure should you take to avoid the possibility of abseiling off the end of your rope (in case you think the rope may not reach safe ground).

Explain:

- Q6. This question relates to Q5 above. Choose the stopper knot you believe will be effective with a Figure 8 descending device.

☐ A



☐ B



☐ C



Explain your answer:

- Q7. Study the images carefully. Is there a correct way to reeve/thread the rope through a Figure 8 descending device? Choose the option you believe is most correct.

☐ A



☐ B

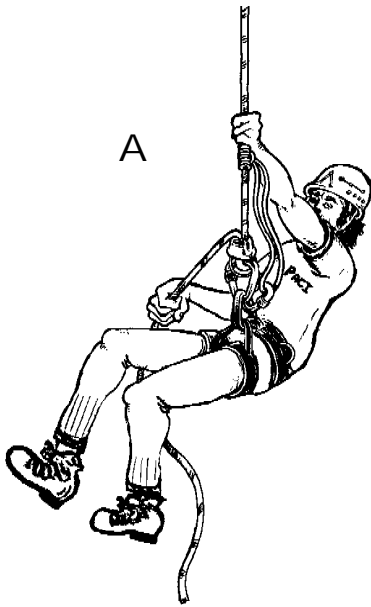


☐ C

Both configurations are safe.

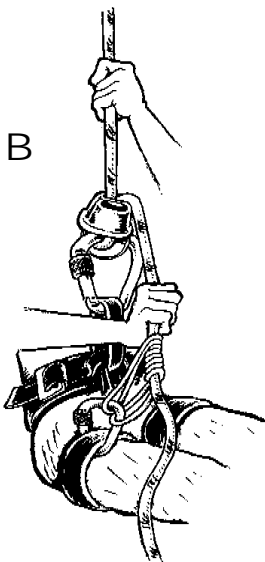
Explain your answer:

- Q8. Study the two diagrams carefully. The diagrams refer to the positioning of a self-belay system for abseiling. Describe at least two (2) advantages and disadvantages for each procedure.



Advantages:

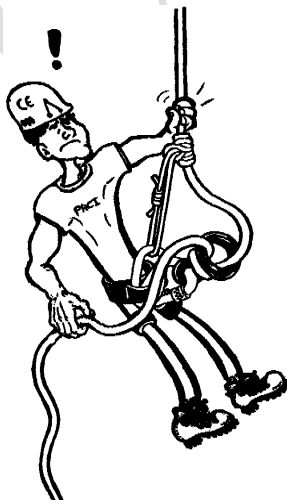
Disadvantages:



Advantages:

Disadvantages:

- Q9. You have accidentally released your prusik hitch self-belay and it has locked up. No matter how hard you try, it won't release. Describe the procedure to release the self-belay so you can continue your descent. Assume that you have no additional equipment.



Explain the procedure: (break it down into logical simple steps)

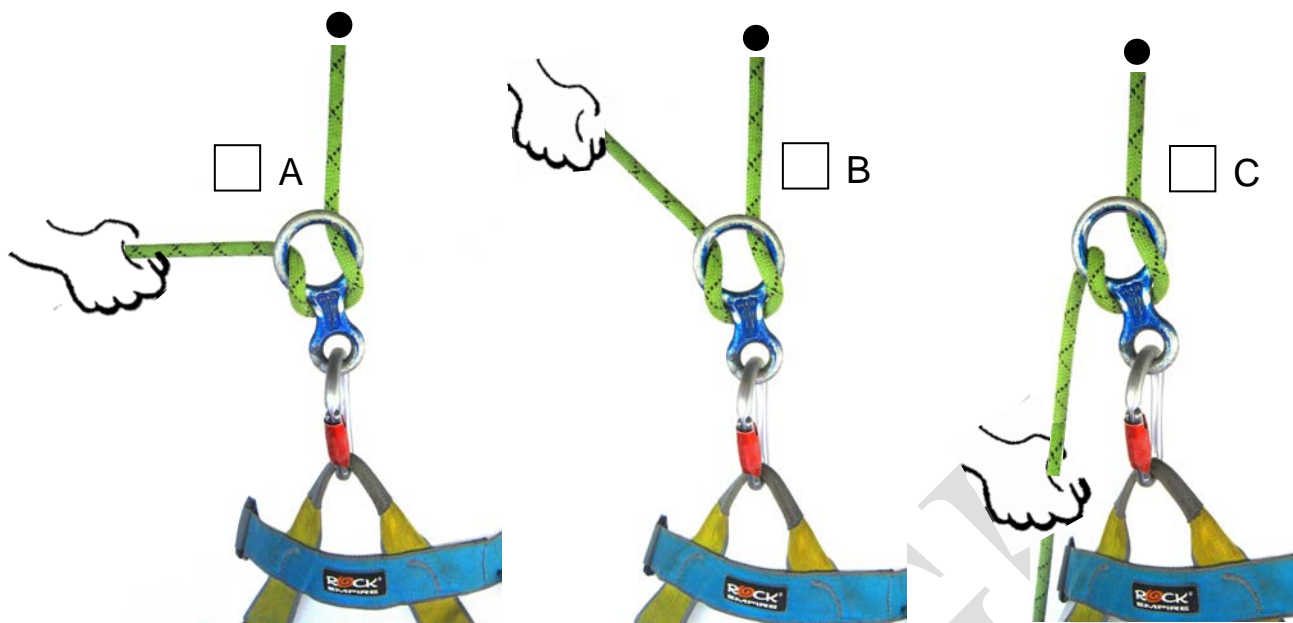
Step 1: _____

Step 2: _____

Step 3: _____

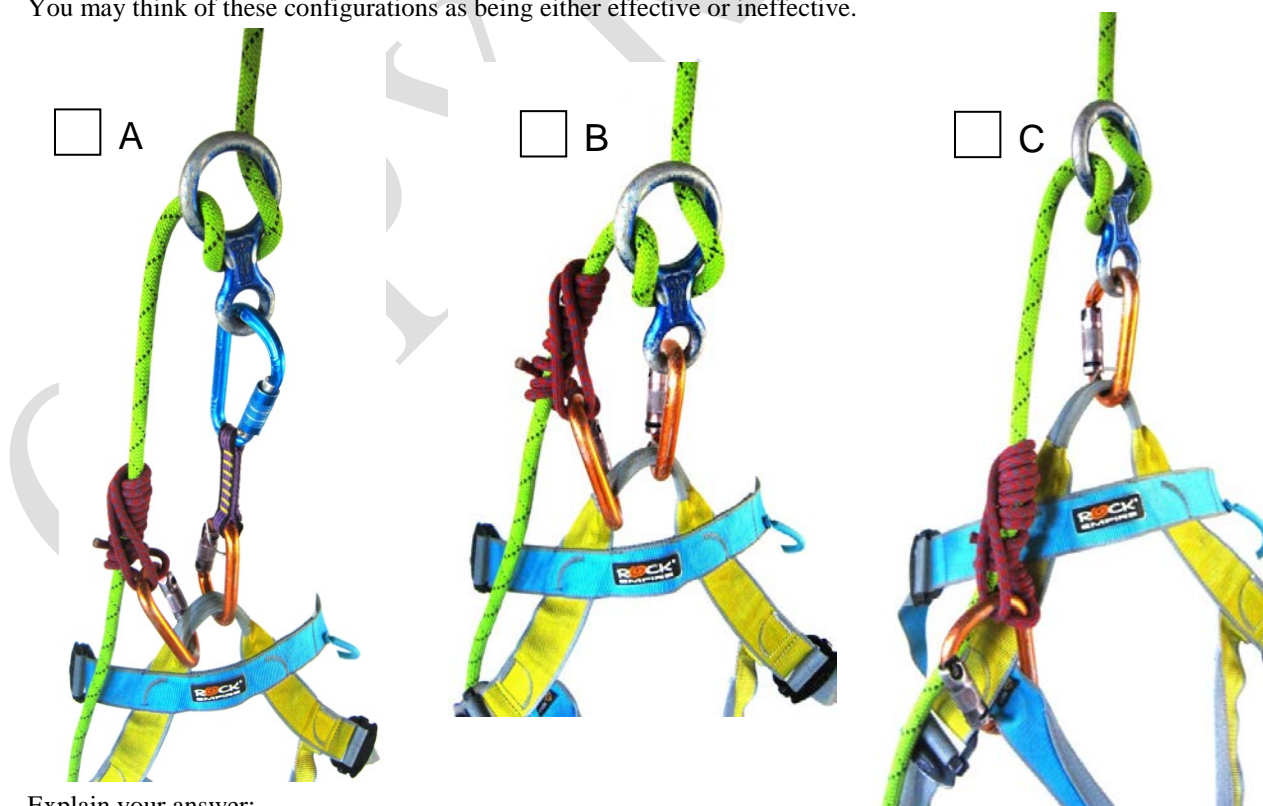
Step 4: _____

Q10. Study the images ABC carefully. Indicate the image that maximises brake control. Explain your answer.



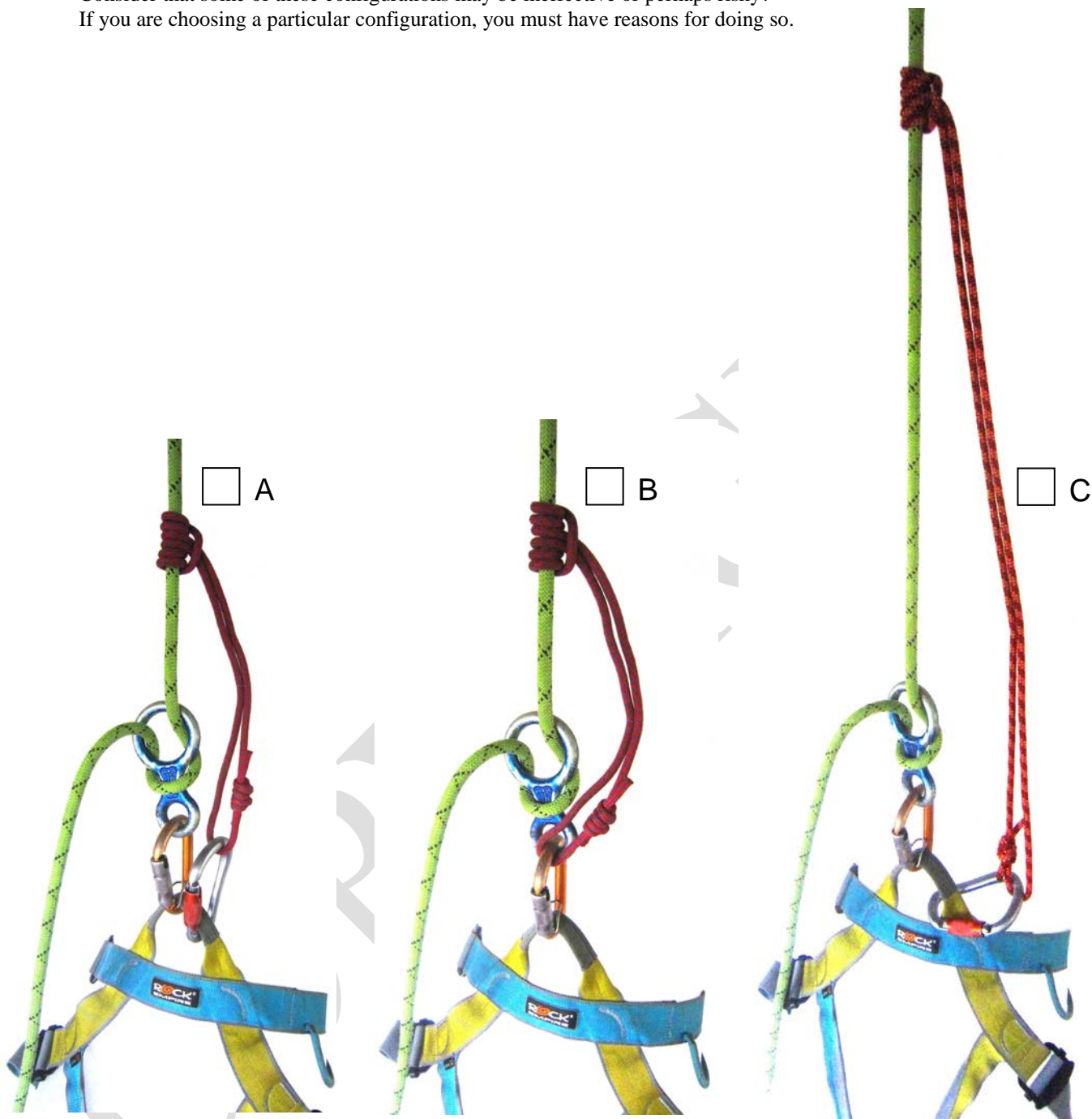
Explain your answer:

Q11. Study the images carefully. Choose the image you believe is configured optimally for a 'self-belay' system. You may think of these configurations as being either effective or ineffective.



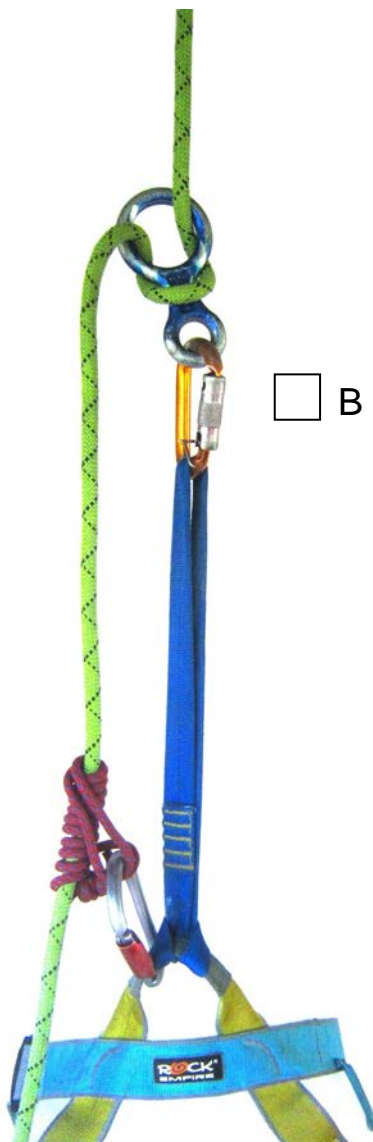
Explain your answer:

- Q12. Study the images carefully. Choose the image you believe shows the optimal configuration of a self-belay system. You will be required to explain your answer including why you think the alternatives are unsatisfactory. Consider that some of these configurations may be ineffective or perhaps risky? If you are choosing a particular configuration, you must have reasons for doing so.



Explain your answer – you must also explain why you think the alternatives are unsatisfactory.

- Q13. Study the images carefully. Choose the image you believe shows the optimal configuration of a self-belay system. You will be required to explain your answer including why you thought the alternative was unsatisfactory.

☐ A☐ B

Explain your answer, including why you thought the alternative was wrong.

- Q14. Study the descending devices carefully. Which one is the 'odd man out'? Indicate your answer. You will be required to explain your answer.

☐ A


Figure 8

☐ B


Critr

☐ C


SMC Micro U-rack

☐ D


Scarab

Explain your answer:

- Q15. Study each device carefully. Which devices allow the user to detach and release the abseil rope without disconnecting the device from the carabiner. Indicate your answer. There may be more than one correct answer.

☐ A


Scarab

☐ B


Hydrobot

☐ C


Critr

☐ D


Rack

☐ E


Kong Big 8

☐ F


DMM Pivot

☐ G

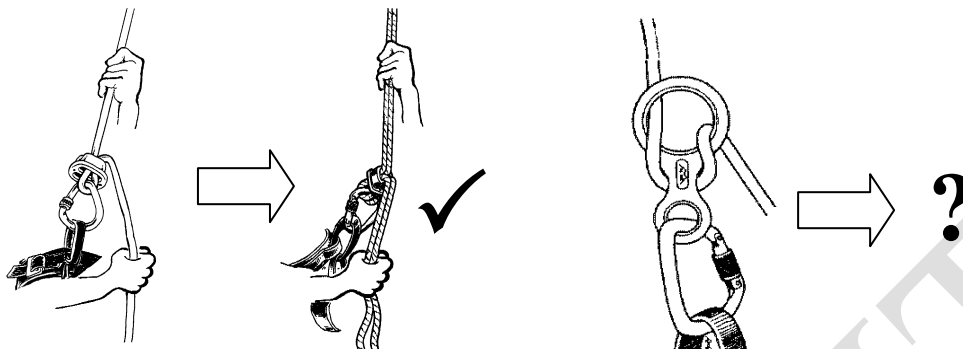

Pilot

☐ H


GriGri

Q16. Is it possible to perform an abseil descent on double ropes using a figure 8 descending device?

☐ Yes

☐ No


Explain your answer

Q17. When choosing a rope for abseiling purposes, the preferred type/design is:

- ☐ A It makes no difference what type of rope you use for abseiling
- ☐ B Dynamic (high stretch) rope is best for abseiling
- ☐ C Low stretch (aka 'static') rope is best for abseiling
- ☐ D None of the above

Q18. **True or False**

The original first generation 'GriGri' was released in 1991 by Petzl (France). The original GriGri is still in use, although newer versions have been released. Consider that over the past 30 years, ropes are getting thinner, and there are many choices today compared to 30 years ago. Can you safely perform an abseil descent with an original VER 1.0 Petzl GriGri using 9.0mm diameter rope?

☐ Yes

☐ No


9 mm
diameter rope



Explain your answer:

Original VER 1.0 GriGri

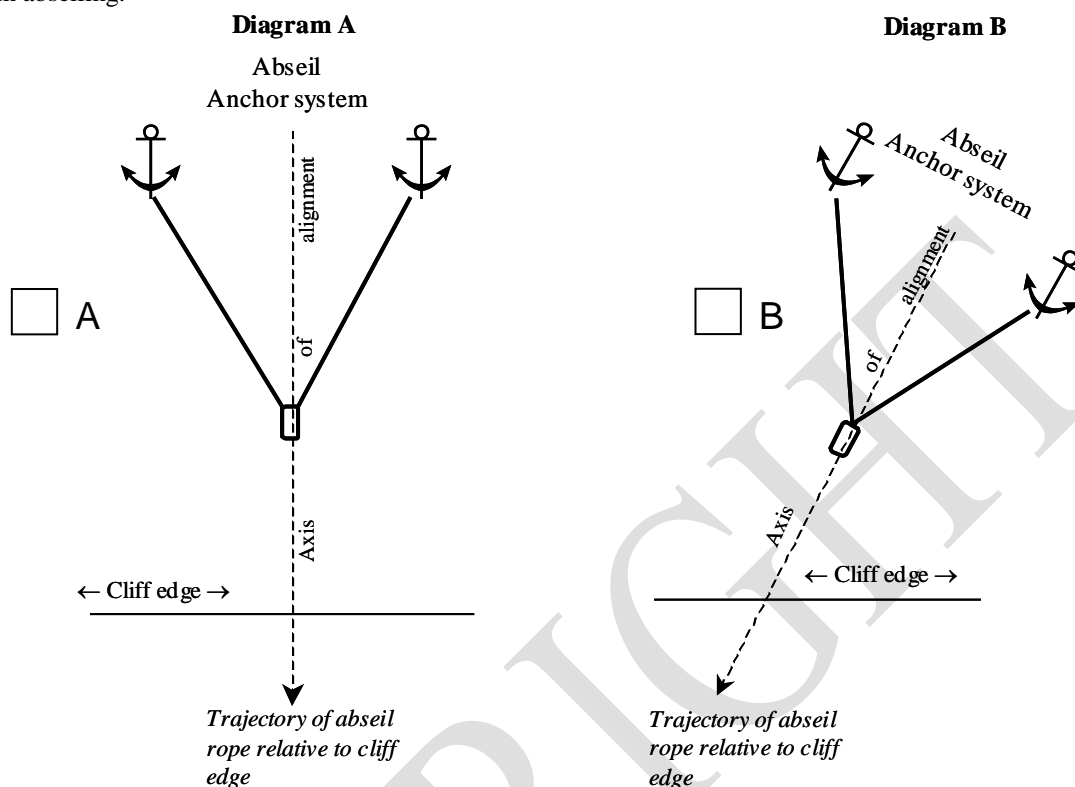
Q19. Study the photos of the GriGri device. Choose the photo you believe indicates the correct way to install the rope.



Q20. Study the photos carefully. Choose the configuration you believe is most correct.



- Q21. Indicate the diagram which correctly illustrates the trajectory that an abseil rope should be deployed in (relative to an edge). Explain your answer. Provide an explanation for each diagram describing why it is acceptable or unacceptable for use in abseiling.



Explain your answer:

- Q22. Before attempting an abseil descent, it is strongly recommended that you carry out an 'ABCDE' safety check of your system. What does each letter of the following checklist stand for and briefly describe what is required of each step:

	SHORT DESCRIPTOR	DETAILED MEANING
A		
B		
C		
D		
E		
F		

- Q23. Study the photos carefully. The terms 'Descending device' and 'Belay device' are often used interchangeably and indeed, some would posit they mean the same thing. Do these terms mean different things? For each of the devices shown, indicate the principal purpose (or intent) of the device.

A



B



C



D



E



- Q24. Choose a rope that you believe is optimal for recreational single-pitch abseiling activities. To assist with answering this question, you should visit the website of each manufacturer.

☐

A



Sterling Canyonlux
8.0mm rope

☐

B



Bluewater II
11.4mm rope

☐

C



Beal Apollo
11mm rope

☐

D



Edelrid static low stretch
10.5mm rope

Explain your answer:

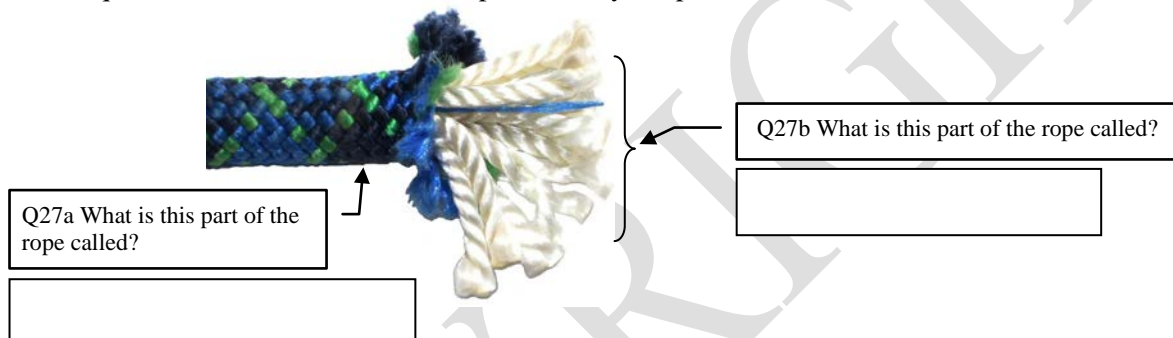
Q25. Which type of rope is best suited for abseiling purposes? Indicate your answer.

- ☐ EN 1891 Low stretch rope
- ☐ EN 892 dynamic rope

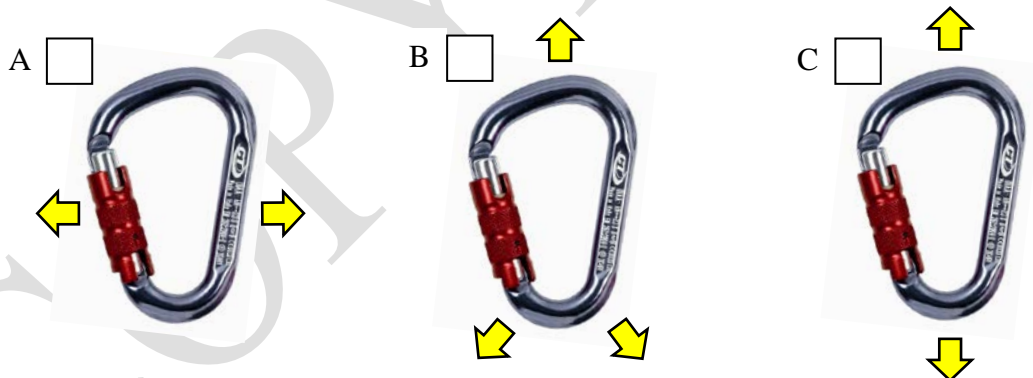
Why? Explain your answer.

Q26. What is the maximum theoretical lifespan of an abseiling rope (when used at a workplace)?

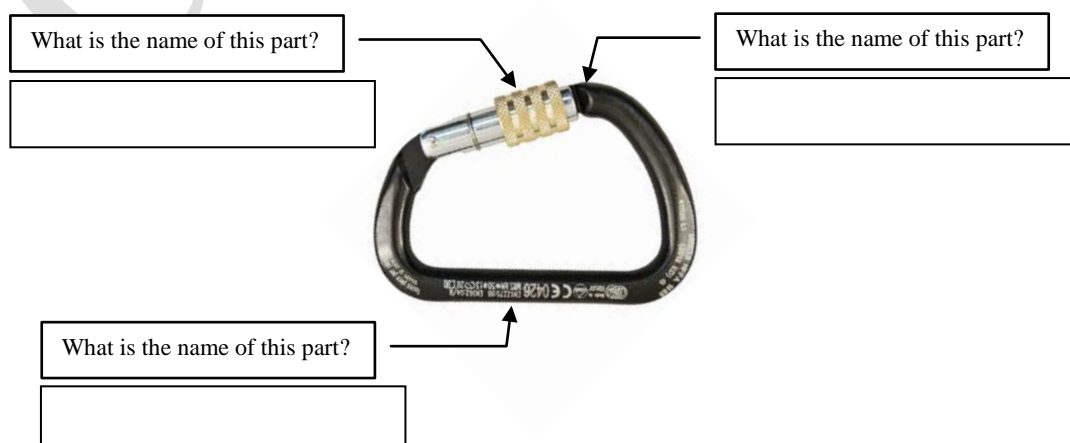
Q27. This question is about human rated ropes. Identify the parts indicated.



Q28. Study the images carefully. Which of the images indicates the correct loading profile for a carabiner?



Q29. Identify each of the parts of a carabiner.



- Q30. All human rated carabiners have various markings. Consider the symbol enclosed by the yellow circle. What does this mean? Indicate your answer.



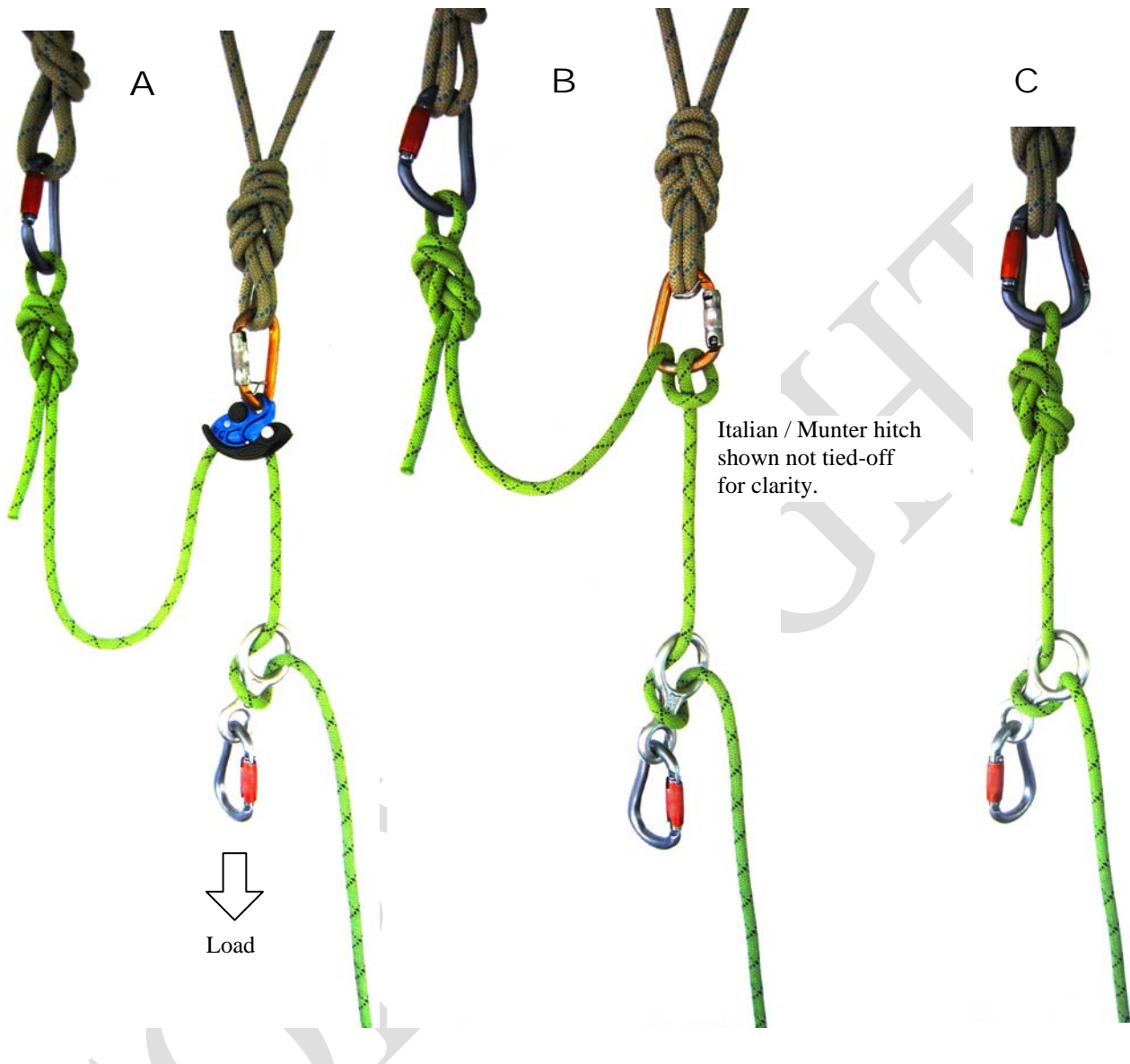
- ☐ A It is the safe working load (SWL).
- ☐ B It is the design factor: 2.7 (you need to multiply the design factor to work out the rated strength)
- ☐ C It is the working load limit (WLL).
- ☐ D It is the ultimate strength.
- ☐ E None of the above are correct.
- Q31. Study the photo carefully. The locking carabiner has become misaligned. Describe the principal drivers for this type of situation.



Explanation:

How can this situation be avoided? Explain.

Q32. Study the images (ABC) carefully. Each system is depicting a different method of setting up and deploying an abseil rope. There are advantages and disadvantages of each system. Answer the questions below.



What type of system is depicted in image 'A'?

What type of system is depicted in image 'C'?

Are there any advantages with 'A' in comparison to 'B'? ☐ Yes

☐ No

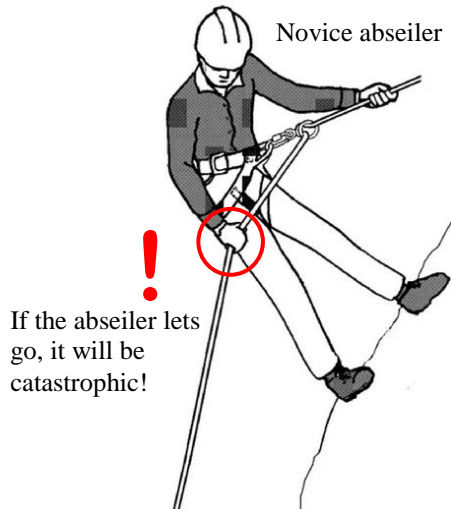
Explain your answer:

Is it possible to argue that one system is optimal for dealing with emergencies? ☐ Yes

☐ No

Explain your answer:

- Q33. Study the images carefully. A novice abseiler is preparing to descend a vertical cliff. This will be the first time that this person attempts to abseil. If the person lets go of the rope, it will be catastrophic. What precautions (if any) could be taken to safeguard the person? Choose an answer.



Choose an answer:

- ☐ A No precautions are necessary, you need to trust that the novice won't let go of his rope.
- ☐ B Use a bottom brake (another person holds the rope from below).
- ☐ C Use a top-managed safety belay rope.
- ☐ D Safety precautions are ridiculous; you can't protect people from every conceivable risk. We live in a risk averse society and wrapping people in cotton wool creates less resilient people.
- ☐ E Use a top-managed belay system only if it's a 'workplace' – otherwise, just leave people alone and let them have fun (risk = reward).
- ☐ F None of the above are correct.

- Q34. Study the images carefully. Choose the image you believe is the most effective (or optimal) method of attaching a safety belay rope to a novice abseiler's harness.

☐ A

☐ B

☐ C

☐ D



Explain your answer:

Would your answer be different if you were a 'Guide' running an abseiling session for 40 school children and had to attach the safety belay rope repetitively for each and every student? Explain.

Final score _____



Click on this button to lock the document.

NOTE: Once you lock the document, it can no longer be edited.

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 in enabling me to setup and deploy an abseiling rope, including performing an abseil descent from height.

Student signature: _____

Date: _____