Planning & Management

1. On long drops the stretch in the un-weighted back-up rope may render it ineffective as you near the ground. What can/should you do about this?

2. What particular care should you take when using a fixed back-up device for lowering a casualty?

3. How would you work out the SWL of a rope?

4. Explain how, where and why you would set up and enforce an Exclusion Zone.

5. What must you do if your rope or harness has come into contact with an unknown chemical?

6. *Generally* speaking, what is the SWL of your rope access equipment?

Equipment

7. How is equipment traced to a certificate of conformity?

8. What information does a certificate of conformity contain?

9. When it is used for rope access work, at what interval should equipment be "thoroughly examined"?

10. Who can undertake a "thorough examination"?

11. What type/class of harness should you use in a fall arrest situation?

12. What type of karabiner locking mechanism is suitable for rope access?

13. Why are alloy karabiners prevented from use in some work environment such as the offshore oil sector?

14. What force can be applied to a toothed ascending device before it begins to damage the rope sheath?

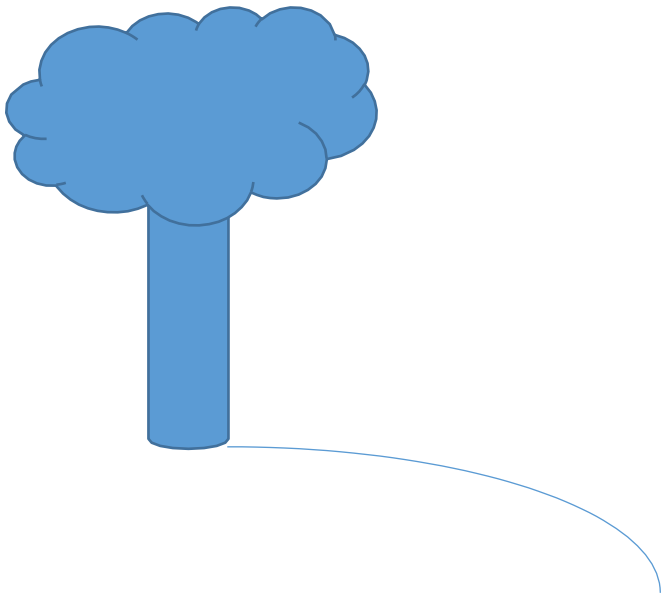
Rigging

15. Draw a diagram of how you would rig a rope access system to descend for each of the scenarios involved: (Be sure to indicate anchor selection, knot choices and other considerations):

a) Two structural i-beams 4m apart:

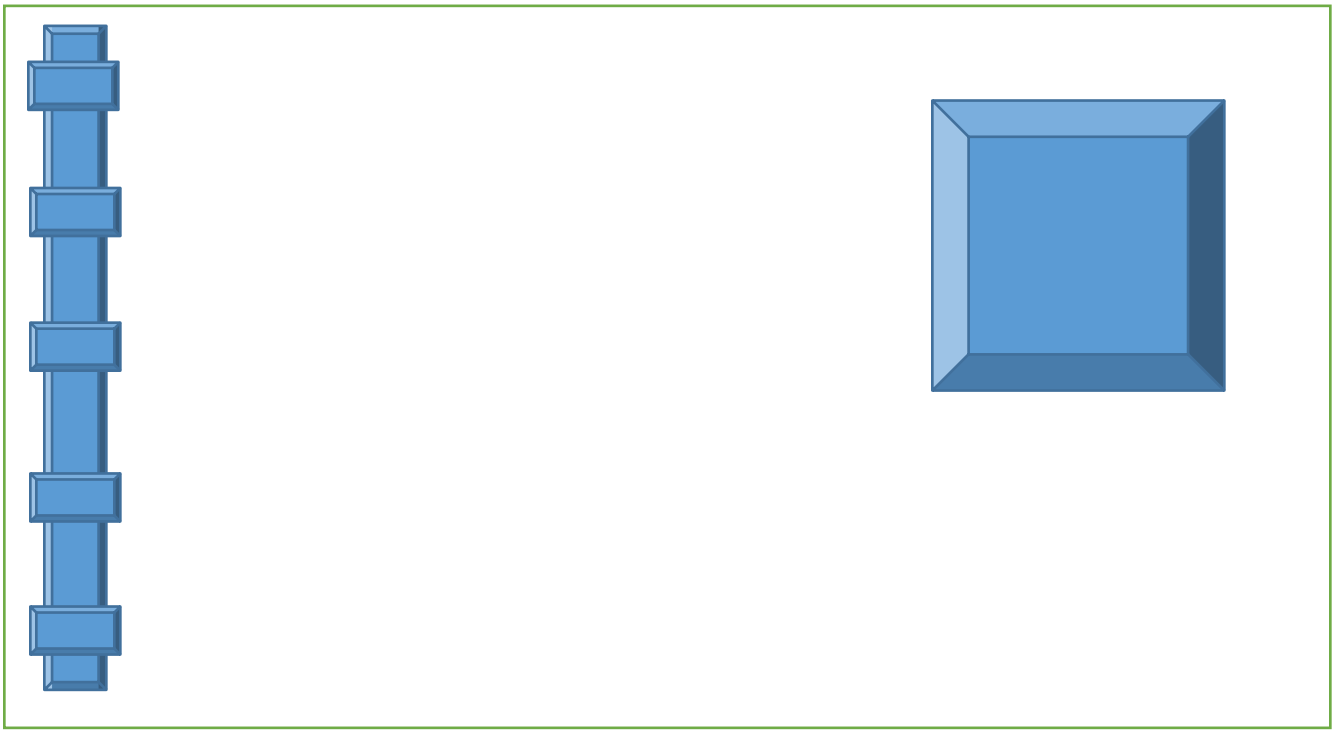
b) One structural i-beam:

c) From a tree, with no strength reduction to the slings or rope:



d) Vertical Descent from the top of a flat roofed residential building:
(Structure to the left is a certified rail with anchors to the roof spaced 5m apart, the big structure to the right is the Mechanical Room)

<_____30m_____>



Position of abseil

16. By what percentage does a larks foot or choker attachment weaken a tape sling?

17. Suggest three ways of loading a karabiner than would seriously weaken it?

18. What is the "critical angle" when rigging ropes with a "Y hang" and why?

19. What is the "critical angle" when rigging ropes with a "Deviation" and why?

20. When using rope protectors is it better to attach them to the structure or to the rope, why?

21. If retrieving ropes with a "pull through" what should you be particularly aware of?

Rigging for Rescue and Hauling

22. If you were hauling a casualty with a 2:1 mechanical advantage and you added a further 3:1 to it what would the mechanical advantage now be?

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24. What is the major disadvantage of using a "locking ascender" type of hauling system?

Climbing Techniques

25. What is the formula for working out fall factors?

26. You and your mate fall the same distance with the same fall factor. You are attached by dynamic cow's tails, but your mate is attached by a tape slings. Who will hurt themselves most and why?

27. According to the IRATA international code of practice device lanyards need to be able to withstand what?

Rescue Considerations

28. Name two factors that affect the self-breaking function of a descender?

29. How long do you think a "totally inert" technician (without muscular movement) could hang in a harness before medical difficulties occur.

30. When considering Suspension Intolerance in casualty rescue, after safety considerations what should be the priority?