Quiz #2: Ropework

1. Which of the following is **not** a significant source of permanent rope damage?
   a. abrasion of rope on rock, ice, or trees
   b. frequent bending or twisting of the rope
   c. dirt which is ground into the rope fibers
   d. strain caused by hard falls or very heavy loads

2. Which of the following is the strongest way to rig a sling anchor?
   a. \( \theta = 120^\circ \)
   b. \( \theta = 60^\circ \)
   c. \( \theta = 45^\circ \)
   d. \( \theta = 20^\circ \)

3. When using a runner, it is strongest when:
   a. used as a simple loop over a tree stump.
   b. girth hitched around a tree stump.
   c. doubled around a tree stump.

4. Which of the following is **not** an important element of good belaying?
   a. the braking hand never leaves the rope
   b. the elbows are kept close to the body and don't get behind the hips
   c. the belayer must always be sitting
   a. in a hip belay, the rope must run around the hips, not the waist

5. Which of the following causes the greatest permanent damage to rope?
   a. water
   b. sunlight
   c. gas and oil
   d. car battery fluid

6. Which of the following is an advantage of a doubled runner around a tree, compared with a runner girth hitched around a tree?
   a. doubled runner is stronger
   b. doubled runner is less likely to cross-load the carabiner
   c. doubled runner is less likely to slip

7. A large rock falls on a rope. The rope is pull-tested by 6 heavy men, and does not break. The rope is safe for use.
   a. True
   b. False

8. It is important to keep carabiner hinges well-lubricated, so they will work smoothly.
   a. True
   b. False

9. Stepping on a rope causes invisible damage by **grinding dirt** into the fibers.
   a. True
   b. False
Matching continued

25. A tie-in method which must be cut in at least two places to fail.
   a. square knot (reef bend)
   b. clove hitch
   c. half hitch
   d. ASRC harness

26. How does one place a rope on the ground so it pays out freely?
   a. coiling
   b. stacking randomly
   c. stacking in neat figure 8s

27. The proper call to request a belayer to take up slack in a rope is:
   a. UP ROPE!
   b. SLACK!
   c. TAKE IN!
   d. FORWARDS!

28. Which of the following knots is strongest in rope?
   a. grapevine (double fisherman's) knot (barrel bend)
   b. water knot (overhand bend, ring bend)
   c. butterfly knot
   d. square knot

29. Which of the following knots is least prone to jamming in rope?
   a. grapevine (double fisherman's) knot (barrel bend)
   b. water knot (overhand bend, ring bend)
   c. butterfly knot
   d. figure 8 bend

30. Which knot might be appropriate for tying out a damaged section of rope?
   a. bowline
   b. butterfly
   c. figure 8 loop
   d. square knot (reef bend)

31. Which of the following ascender devices has the greatest reliable strength on 7/16" (11mm) rope?
   a. Prusik knot of 3/8" polypropylene
   b. Gibbs ascender
   c. Jumar ascender

32. With which of the following rappels is a bottom ("fireman's") belay not effective?
   a. figure 8 descender
   b. body (hotseat, dulfersitz) rappel
   c. rappel rack
   d. 6-biner rappel
33. Brake bars may cause side-loading of carabiners, which is considered dangerous due to low carabiner strength in this axis.
   a. True
   b. False

34. Blue Water caving rope is more resistant to abrasion than Goldline mountain lay rope for light abrasion; the opposite is true for heavy abrasion.
   a. True
   b. False

35. Most ropes designed for lead climbing have a parallel-fiber core, whereas static caving ropes (e.g. Blue Water) have a braided or twisted core construction.
   a. True
   b. False

36. Which of the following is a reason for using Blue Water rope instead of Goldline for mountain rescue?
   a. Blue Water has a greater capacity for energy absorption
   b. Blue Water is more resistant to heavy abrasion
   c. Blue Water is more easily examined for damage
   d. Blue Water handles better

37. "Army" or "Hanger" rappels, using a diaper seat and a single non-locking carabiner for a biner wrap, are extremely dangerous. Which of the following is not a hazard with this rappel method?
   a. Diaper seat slings will fail if cut in just one place, and may slip up and cause loss of control.
   b. Weld abrasion of the seat by the rope is a common and severe problem when just one biner is used.
   c. A biner-wrap rappel cannot develop adequate braking force for a controlled rappel.
   d. Non-locking carabiners may twist around and unclip easily.

38. "True double redundancy" (a redundant phrase in itself) in an ascending rig means:
   a. each part of the rig is doubled.
   b. two points of contact with the rope.
   c. any one point of contact with the rope may be removed, leaving the person in a satisfactory stance (e.g. not hanging upside down by a foot).

39. Nylon ropes are slightly weaker when wet than dry, but are not permanently affected by water.
   a. True
   b. False

40. Although nylon has a melting point of about 250°C, damage occurs at about 150°C, which is easily reached on the back shelf of a car parked in the sun on a summer day.
   a. True
   b. False
1. Which of the following is not a significant source of permanent rope damage?
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d. in a hip belay, the rope must run around the hips, not the waist

5. Which of the following causes the greatest permanent damage to rope?
a. water
b. gas or oil
c. car battery fluid

6. A knot which may be used to form a loop in the middle of the rope which will not slip when stressed from both ends.
a. bowline knot
b. butterfly knot
c. figure 8 loop knot
d. overhand knot

7. The basic knot used for forming a loop at the end of a rope is:
a. bowline
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

8. Used for tieing in to the end of a rope directly to a climber's waist.
a. grapevine (double fisherman's, barrel) knot
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

9. A knot which may be used to tie a loop at the end of a rope. May be used to tie a loop in the middle of a rope.
a. bowline knot
b. butterfly knot
c. figure 8 loop knot
d. overhand knot

10. Used for backing up other knots.
a. bowline
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

11. A knot which may be used to tie a loop at the end of a rope if the ends are not to be loaded collinearly (in line).
a. bowline knot
b. butterfly knot
c. figure 8 loop knot
d. overhand knot

12. Used for tieing two ropes together. Is secure, yet doesn't jam too tightly.
a. grapevine (double fisherman's, barrel) knot
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

13. Used as an ascendeur knot using a webbing loop.
a. grapevine (double fisherman's, barrel) knot
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

14. Used as an ascendeur knot using a small-diameter rope loop.
a. grapevine (double fisherman's, barrel) knot
b. bowline-on-a-coil
c. water knot (overhand bend, ring bend)
d. figure 8 band

15. Used to form an adjustable loop in the end of a rope for lines not bearing heavy loads.
a. Prusik knot
b. Headden knot
c. hitch
d. taut-line hitch

16. Used to fasten a loop sling around a tree or other anchor.
a. Prusik knot
b. Headden knot
c. girth hitch
d. taut-line hitch

17. Used to put a hitch on a post; also used for forming rope stretchers.
a. Prusik knot
b. Headden knot
c. girth hitch
d. taut-line hitch

18. Not used to back up knots; has a very few applications in mountain rescue.
a. Prusik knot
b. Headden knot
c. girth hitch
d. taut-line hitch
(Matching continued)

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