

SECTION 28 ROPES

The Certification Board suggest it will take a class of **40** individuals **16** hours to cover the following objectives in this section (actual time may vary based on class size).

BASIC

- 28-01.01** Trainee, when given name, picture, or actual knot, shall identify it and describe the purpose for which it would be used:
- | | |
|-----------------------------------|--------------------------------|
| A. Becket (sheet) bend | F. bowline on a bight |
| B. bowline | G. half hitch |
| C. clove hitch | H. figure-eight |
| D. half sheep shank with a safety | I. figure-eight on a bight |
| E. chimney hitch | J. figure-eight follow through |
- 28-01.02** Trainee shall identify rope safety procedures.
- 28-01.03** Trainee shall identify and/or demonstrate the terms used when tying a knot or hitch:
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|---|--|
| A. standing part when tying a knot or hitch | D. a loop when tying a knot or hitch |
| B. running part when tying a knot or hitch | E. a round turn when tying a knot or hitch |
| C. a bight when tying a knot or hitch | F. half hitch when tying a knot or hitch |
- 28-01.04** Trainee shall identify the construction characteristics and appropriate uses of both natural and synthetic fiber ropes:
- A. Characteristics of natural fiber (manila) ropes for utility use only:
1. moisture retention
 2. floatability
 3. resistance to rot, mildew and attack by marine organisms
 4. resistance to surface abrasion
 5. resistance to acids, alkalis and solvents
 6. safe working strength of new rope: 3/8 inch manila, 1/2 inch manila, 5/8 inch manila, 3/4 inch manila
- B. Characteristics of synthetic ropes:
1. moisture retention
 2. floatability
 3. resistance to rot, mildew and attack by marine organisms
 4. resistance to surface abrasion
 5. resistance to acids, alkalis and solvents
 6. safe working strength of new rope of: 1/2 inch nylon, dacron, polypropylene, braided nylon cover with nylon core; 5/8 inch nylon, dacron, polypropylene, braided nylon cover with nylon core; 3/4 inch nylon, dacron, polypropylene, braided nylon cover with nylon core
- C. Uses of ropes:
1. hoisting tools and equipment
 2. securing tools and equipment to immovable objects
 3. rescue
- 28-01.05** Define a life safety rope and one and two person life safety rope including:
- A. maximum working load
 - B. safety factor
 - C. minimum breaking strength
- 28-01.06** Trainee, when given the proper size and amount of rope, shall demonstrate tying the following knots:
- | | |
|-----------------------------------|--------------------------------|
| A. Becket (sheet) bend | F. bowline on a bight |
| B. bowline | G. half hitch |
| C. clove hitch | H. figure-eight |
| D. half sheep shank with a safety | I. figure-eight on a bight |
| E. chimney hitch | J. figure-eight follow through |

INTERMEDIATE

- 28-02.01 Trainee, given the proper rope, shall demonstrate the bight, loop, round turn, and half hitch as used in tying knots and hitches.
- 28-02.02 Trainee, using an approved knot, shall hoist any selected forcible entry tool, ground ladder, or appliance to a height of at least 20':
- A. a 1½ inch or 1¾ inch dry hose with nozzle attached
 - B. a 2½ inch or 3 inch dry hose with nozzle attached
 - C. a 1½ inch or 1¾ inch charged hose
 - D. an axe
 - E. a 6' or 8' pike pole
 - F. a single 14' or 16' (wall) ladder
 - G. a 10' collapsible ladder
 - H. a 14' combination ladder
 - I. working as a member of a team, a 24' extension ladder
 - J. a 15 lb. CO₂ fire extinguisher
 - K. a 20 lb. dry chemical fire extinguisher
 - L. an electric smoke ejector
 - M. a pair of bolt cutters
- 28-02.03 Trainee shall demonstrate the technique of inspection, cleaning, maintaining, storage, safety procedures, and reasons for placing a rope out of service.

ADVANCED

- 28-03.01 Trainee, when given a simulated fire fighting or rescue task, shall select the appropriate size, strength and length of rope as follows:
- A. Trainee shall tie a double loop figure eight on a bight and place it on a victim (the life basket).
- 28-03.02 Trainee shall use a rope to tie ladders, hose, and other equipment so as to secure them to immovable objects as follows:
- A. secure a ladder tip to a building,
 - B. secure a 1½ inch or larger charged line to a ladder
 - C. secure a hose roller
- 28-03.03 Trainee shall select and tie a rope between two objects at least 15' (4.6m) apart, which will support the weight of a firefighter on the rope.