

Rescue Technician Professional Qualification
Chapter 6 Rope Rescue – NFPA 1006 2013 Edition

Rope Technician I

A	MULTIPLE-POINT ROPE ANCHOR SYSTEM	MANDATORY STATION
B	COMPOUND ROPE MECHANICAL ADVANTAGE SYSTEM	MANDATORY STATION
C	ONE PERSON PICK-OFF	OR STATION D
D	DESCEND A FIXED ROPE	OR STATION C
E	ASCEND FIXED ROPE AND SWITCH TO DESCENDING SYSTEM	MANDATORY STATION

Rope Technician II

F	CONSTRUCT AND OPERATE A HIGHLINE SYSTEM Tech II	MANDATORY STATION
G	HIGH-ANGLE VICTIM PACKAGING AND LOWER Tech II	MANDATORY STATION
H	SELF RESCUE Tech II	RANDOM STATION

TESTING REQUIREMENTS

If testing both levels together all mandatory and one random per level. If testing individual levels follow list below.

Level I - Must test 4 skill stations

MANDATORY – Stations A, B, E

RANDOM – Stations C or D

Level II – Must test 3 skill stations

MANDATORY – Stations F, G

RANDOM – Stations H

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STATION A – Multiple Point Rope System	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.1.3	Test Site	

Directions: Given a rope rescue scenario, life safety rope and auxiliary rope rescue equipment, the candidate will select appropriate anchors for the scenario given, construct a multiple-point anchor system, and shall utilize this anchor system in the given scenario so that expected loads are not exceeded and that loads are equally distributed between the multiple anchors. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 8 of the 8 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Appropriate equipment is chosen				
2.	Safe anchor points are chosen and properly utilized.				
3.	System components are protected from abrasion				
4.	Critical angles not exceeded on anchor legs (120 degrees).				
5.	All knots are properly tied and secured with a safety knot				
6.	System safety check completed prior to loading (physical, load and visual/audible)				
7.	Load is equally distributed between all selected anchors				
8.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

Evaluator Comments: _____

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STATION B – Compound Rope Mechanical Advantage System	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.1.2, 6.1.4	Test Site	

Directions: Given a Rescue load (600lbs), an anchor system, life safety rope and associated rope rescue equipment, construct and direct the operation of a compound rope mechanical advantage system which will accommodate the given load, reduce the force required to lift it, control the movement, and hold the load in place when needed. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 10 of the 10 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
	Construction				
1.	System is appropriate for given needs				
2.	Correctly identifies the mechanical advantage system built				
3.	Safe and appropriate attachment to anchor system				
4.	Utilizes associated equipment in an appropriate manner so not to cause rope damage.				
5.	System has the ability to be held while re-setting.				
	Operation of the System				
6.	Performs system safety check (physical, load test and audible/visual).				
7.	Directs team in clear and concise manner				
8.	Operates systems efficiently				
9.	Effectively and safely changes system direction of travel				
10.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION C – One Person Pick Off	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.1.8, 6.2.2	Test Site	

Directions: Given the allotted equipment and fixed rope system you are to perform a one person pick-off of a simulated victim in the high-angle environment. This is to include victim access, disentanglement (if needed), load transfer, and descent to a safe location. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 12 of the 12 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Assembles and checks all appropriate equipment and hardware				
2.	Performs a system safety check (physical, load test and audible/visual).				
3.	Appropriately dons a rated class II or II/III combination harness and appropriate personal protective equipment				
4.	Attaches harness to fixed rope system utilizing a descent control device. (if using a Figure 8 – makes sure device is double wrapped)				
5.	Descends fixed rope system in a controlled manner and makes access to the victim				
6.	Stops descent above simulated victim and locks off descent control device				
7.	Evaluates victim’s overall condition and harness for signs of wear or damage				
8.	Attaches one end of a pick-off device to victim’s harness attachment.				
9.	Attaches other end of pick-off device to descent control device				
10.	Transfers victim’s load onto the descent control device in a controlled manner				
11.	Unlocks descent control device under load and safely rappels with victim to a safe area				
12.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION D – Fixed Rope System Descent	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.1.8	Test Site	

Directions: Given the allotted equipment you are to construct a fixed rope system that is appropriate for a one person load with adequate safety/back-up, descend a minimum of 25 feet utilizing an appropriate harness, hardware and descent control device, and rest suspended (i.e. lock-off) on the system with both hands free upon request of the evaluator. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 11 of the 11 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Selects appropriate equipment and hardware for construction of a fixed rope system				
2.	Attaches rope to anchor by means of tensionless hitch or other recognized rescue knot				
3.	Evaluates system for potential abrasion and shock-loading, and provides for edge protection/padding if needed				
4.	Performs a system safety check (physical, load test and audible/visual).				
5.	Dons a rated Class II or II/III combination harness and appropriate personal protective equipment				
6.	Attaches descent control device to harness and rope system				
7.	Negotiates edge of drop in a manner so as not to shock load the system or produce any excessive damage to system components				
8.	Descends a minimum of 25 feet in a controlled manner, always maintaining brake hand on the rope				
9.	Stops, ties-off the descent control device and rests suspended on the rope system when commanded to do so by the evaluator				
10.	Unlocks the descent control device and continues rappel in a controlled manner				
11.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION E – Ascend A Fixed Rope	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.1.7	Test Site	

Directions: Given a fixed rope system and appropriate equipment you are to ascend the system a minimum of 25 feet, rest suspended when instructed to do so, convert the ascending system to a descending system, and rappel back to your starting point. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 10 of the 10 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Assembles and checks all appropriate equipment and hardware.				
2.	Performs a system safety check (visual inspection, load test and audible announcement)				
3.	Appropriately dons a rated class II or II/III combination harness and appropriate personal protective equipment				
4.	Secures self to fixed rope system by means of ascending hardware, prusik loops, or an ascending system, assuring at least 2 points of contact between the rope and harness system				
5.	Ascends rope a minimum of 25 feet in a controlled, efficient manner				
6.	Stops on rope, suspended by system with hands free, when instructed				
7.	Converts ascending system to descending system, utilizing a descent control device				
8.	Recovers/removes ascending equipment from rope				
9.	Executes a descent to the ground in a controlled manner				
10.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION F – Construct and Operate A Highline Rescue System	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.2.5, 6.2.6	Test Site	

Directions: Given the allotted equipment you are to work as a team to construct and operate an angled highline rope rescue system. Position 1 and 2 are to construct the far side fixed anchor system and high-line trolley system. Position 3 and 4 are to construct the near side anchor system and tensioning system. Upon construction of the system you will have to direct the movement of a simulated rescue load on the system. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 13 of the 13 items being performed correctly

Evaluator Note: Evaluator will note position candidate function in Position #1 _____ #2 _____ #3 _____ #4 _____

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Safe anchor points are chosen (tensionless or high strength tie-offs) or multi-point self-equalizing anchor systems are developed to withstand working load of the system.				
2.	All edges are protected and critical angles are not exceeded				
3.	Track line(s) is rigged across span and anchored on far side				
4.	Track line(s) is tensioned using a simple mechanical advantage system on near side and is anchored appropriately (3:1 or 4:1 system). * Soft rope grab devices (prusiks) should be utilized to warn of system overload				
5.	Track line tension is appropriate for system and does not exceed acceptable safety margins for rope and hardware (500# on dynamometer for unloaded systems or 10 % of sag per 100 foot span per 200# load).				
6.	Pulley/trolley system is placed on track line(s) and control lines are attached to the trolley system				
7.	Control lines are rigged to either simple mechanical advantage systems or a descent control devices as system warrants based on rescue objectives				
8.	System safety check is performed (visual, load test and audible).				
9.	Simulated rescue load (mannequin) is appropriately packaged in a patient transfer device so as to not aggravate any potential injuries, movement within the device is minimized, and victim has appropriate personal protective equipment for the situation				
10.	Simulated rescue load is attached to the system in a safe manner so that the load is secure				
11.	Team directs the movement of the simulated rescue load in a clear and concise manner				
12.	Rescue load is moved to a predetermined point in a safe manner and can be secured at any point during the movement				
13.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION G – High Angle Victim Lower	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station JPR 6.2.2, 6.2.3, 6.2.4	Test Site	

Directions: Working in a team of 4, you are to package a simulated patient utilizing a victim transfer device, construct a lowering system with belay, and lower the simulated patient to the ground. Position #1 is responsible for assessing rescue needs and directing the team and the lowering operation. Position #2 will rig and operate the lowering system. Position #3 is responsible for patient packaging and rigging/operating the belay system. Position #4 is responsible for patient packaging and rigging/operating any needed tag lines. At any given time, the evaluator may have the candidates change positions. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 13 of the 13 items being performed correctly

Evaluator Note: Evaluator will note position candidate function in Position #1 _____ #2 _____ #3 _____ #4 _____

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Rescue needs are assessed and communicated				
2.	Appropriate anchors or anchor systems are chosen.				
3.	All edges are protected and critical angles are not exceeded				
4.	Descent control device is attached to anchor and lowering line is rigged to device.				
5.	A separate belay system is constructed which is appropriate for the rescue load to be moved on the system.				
6.	A system safety check is performed (visual, load test and audible)				
7.	Simulated patient (mannequin) is positioned in patient transfer device and secured appropriately using webbing/rope so as to minimize any movement during evacuation.				
8.	Lower line is attached to the patient transfer device.				
9.	Belay line is attached to patient transfer device and/or patient				
10.	Simulated patient is lowered in a controlled manner to the ground				
11.	Load can be secured in place at any time during the lowering operation				
12.	Tag lines are used where appropriate				
13.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure				

PASS _____	PASS _____
FAIL _____	FAIL _____

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STATION H – Self Rescue	Test Date	Candidate #
Reference NFPA 1006 (2013 Edition) Chapter 6 Mandatory Station 6.2.1	Test Site	

Directions: Given the allotted equipment you are to descend a fixed rope system, engage an obstacle during the descent, and work your way past the obstacle in order to continue your descent to the ground. Do you have any questions?

Performance Outcome: Pass/ Fail will be determined by 16 of the 16 items being performed correctly

No.	Task Steps	Initial Test		Retest	
		Yes	No	Yes	No
1.	Selects appropriate equipment to perform evolution.				
2.	Properly dons an approved Class II or II/III combination harness				
3.	Attaches descent control device to rope				
4.	Attaches descent control device to harness				
5.	Performs a system safety check of existing fixed rope system (visual, load test and audible).				
6.	Descends rope in a controlled manner and engages obstruction				
7.	Attaches rope grab device (prusik, ascender) to rope above descent control device				
8.	Attaches other end of rope grab device to harness				
9.	Forms girth hitch using rope below obstruction				
10.	Steps up into girth hitch and load rope grab device to transfer weight				
11.	Removes descent control device from rope and places it on rope below obstruction				
12.	Steps up in girth hitch to transfer weight to descent control device				
13.	Removes rope grab device from line.				
14.	Switches over to descent in a controlled manner				
15.	Continues descent to ground				
16.	Were all tasks completed in a SAFE manner? (“NO” indicates automatic failure)				

PASS _____	PASS _____
FAIL _____	FAIL _____

Evaluator Comments: _____

Evaluator Signature: _____ Evaluator # _____

Re-Test Evaluator Signature: _____ Evaluator # _____