



## Leadership Training Committee Angeles Chapter • Sierra Club

### LTP Written Examination for M and E Candidates

This written examination for M and E is an open book learning experience with no time limit, as well as a test of your knowledge of the LTP leadership material. It should be completed prior to your applying to become a provisional leader at the M or E level. If the answers to some questions are not readily apparent to you, review of the two primary reference, *The Leadership Reference Book* and *Mountaineering: Freedom of the Hills*, may help. This review may then enhance your knowledge of what you need to know and where to find it readily.

The difference between the M and E examination answers lies in the number of questions to be answered and the completeness and general quality of the answers. It is expected that answers written for the E rating will show more optional courses of action and the increased perception of the problem being considered that a more experienced person would be expected to have.

Please type, print or write clearly so that the answers are easily read and understood. Better to lean toward more completeness than less.

It is intended that this exam be a useful part of your leadership development. Your views on the exam are solicited and will be much appreciated.

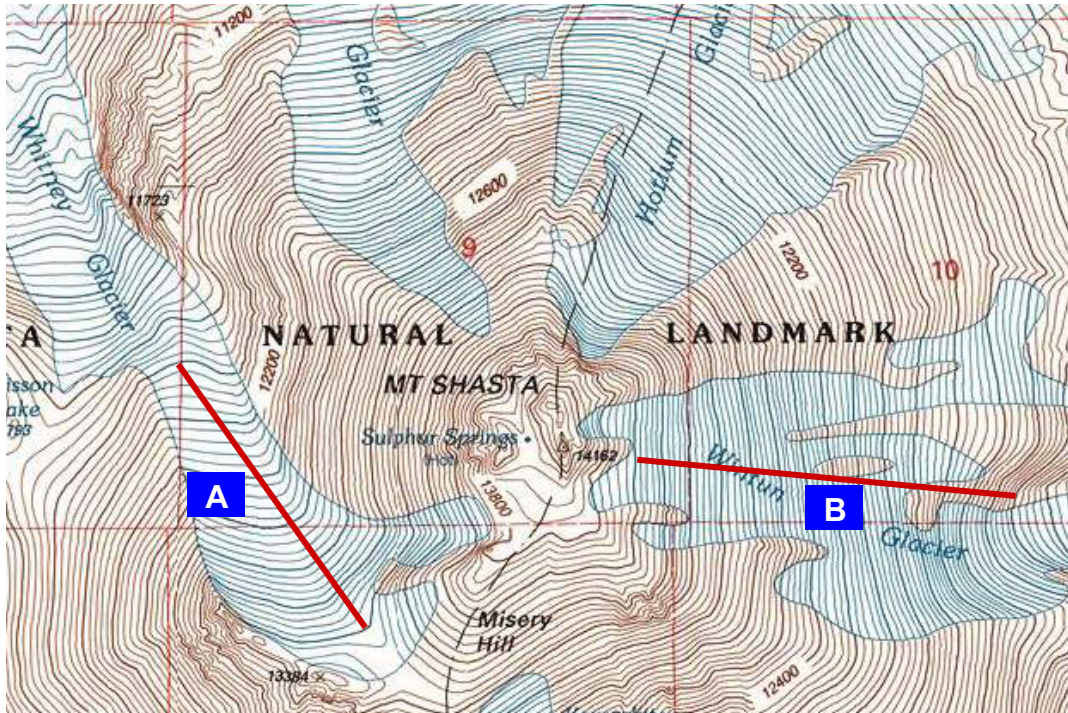
Please email your examination to [LTCProvisionalLeadCommittee@gmail.com](mailto:LTCProvisionalLeadCommittee@gmail.com)

### Part I: M and E complete all ten

1. List four of the most important aspects of pre-trip planning and preparation.
2. Indicate at least three things for leaders to cover at trailhead briefings.
3. Name five important considerations in the selection and use of a group campsite for ten people.
4. List the most important items to remember concerning Sierra Club insurance coverage.
5. Select several of what you feel are the most important equipment essentials for leaders to carry on a weekend trip and describe the reasons for your selections.
6. List six qualities of leadership. Choose any three of the six and describe briefly (1 to 3 sentences) why that quality is essential to good leadership.
7. List five of the most important leader responsibilities in the Angeles Chapter Safety Policy.
8. What are the early symptoms of high altitude pulmonary edema (HAPE), and what action should immediately be taken when the symptoms are recognized?
9. Please describe the difference between an M trip and an M-restricted trip.
10. Please describe the circumstances that you can use a rope on an M trip that has not been approved by the Mountaineering Oversight Committee.

## Part II: M complete questions 1,2,3,4,7; E complete all questions.

1. Indicate all the conditions you can think of for roping up (excluding “class 4” or “class 5” climbs).
2. You are planning a very strenuous late spring trip of 9 miles each way in the southern Sierra. The first 4 miles and 1000 feet of gain are on a good trail. This is followed by 5 miles and 3000 feet of gain in moderate cross-country travel (class 1 and 2). Your group members are known to be in good condition and should easily be able to maintain your pace.
  - a. Using the appropriate Naismith Rule for a dayhike, estimate the roundtrip time for the trip. (Show your calculations).
  - b. At what time would you schedule the start?
  - c. What is a moderate water requirement per person?
  - d. At the end of a good trail (4 miles into the hike, 14 miles and 3000 feet of gain to go), an unseasonable heavy snow begins, and it appears that it will continue. Conservatively estimate the time required to finish the entire trip. What do you decide to do?
3. At the roadhead of a trip described as easy, all members of your group arrive, but your assistant leader does not. What options do you have?
4. You are leading a group along a trail at the base of a long ridge, which rises on your left. You have not kept track of your location on the trail, which is marked on your map. You must know your location on the trail rather accurately in order to define the right spot to leave it in order to climb the only ridge that will lead directly to the peak. You can see and recognize LTP Peak off to your right, and it also shows clearly on your map. You have a simple Silva compass without declination offset. You have decided at this time to determine where you are on the trail. Clearly describe each of your steps in the use of the terrain, the map, and the compass to define your location on the map. Make sure your answer is sufficiently detailed. **Statements and phrases providing no more information than “orient the map,” “take a bearing,” and “adjust for magnetic declination” are inadequate responses to the question.**
5. An individual who signed up by mail for your backpack trip does not show up at the roadhead. After hiking all day, you discover this person at camp. He explains that he likes to get an early start and decided not to wait for the group. He wants to camp with our group and climb a peak with you the next day. How do you handle this situation?
6. For an early season Sierra peak climb you have stated in the schedule write-up that mandatory equipment includes crampons and ice axe. At base camp, three experienced people tell you that they did not bring their crampons because they preferred to wear their lighter boots, which their crampons do not fit. They point out that they do have ice axes and that it can be seen from base camp that the steep part of the snow can be avoided by staying on snow-free rock on a good route to the summit. What decisions do you make and give your reasons.



7. Route segments A and B are shown on the above map. For each route, answer the following questions:

A. What is the average slope angle in degrees of the entire segment?

B. What is the highest slope angle between two index contour lines along the segment?

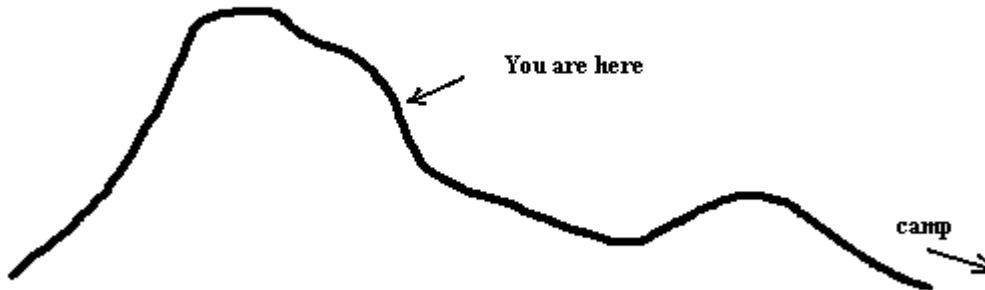
C. Based solely on slope angle, would snow travel along the segment be M or E rated? If M rated, what other factors might require it to be E-rated?

**Part III -- Essay (Be complete; one paragraph to one page are your limits on each question.)**

**M complete two from questions 1-5 and three from 6-11**

**E complete any ten**

1. You are three hours into a four-hour summit climb. (You had estimated that if all goes as planned, you will be able to return to the roadhead by 4pm.) An electrical storm is brewing, and you determine that the group probably cannot attain the summit before the storm hits. This figure below shows the profile of your route:



- a. Indicate the most dangerous and safest spots on the profile in the event that the electrical storm arrives (on the basis of likely frequency of being hit and of receiving ground currents).
  - b. Three of your ten followers express a strong desire to go on to the top and seem about ready to leave the party. The rest look at you with uncertain glances. What do you do?
  - c. Describe the safest body position when stopped under lightning conditions.
2. You are in the Sierra on the 2<sup>nd</sup> day of a 4-day backpack with a typical mixed bag of 10 Sierra Clubbers. A member of the trip slipped and appears to have a broken bone in his lower leg. (It will turn out, on detailed examination, to be a fractured fibula.) Describe what you would do to handle the situation.
  3. You are the assistant leader of a difficult climb in Death Valley. You and a slow hiker you have been accompanying come upon another hiker lying in the gully you are climbing up. Upon examination he appears to be suffering from heat stroke. You are two hours from your destination and about 15 minutes behind the rest of the group. What would you do?
  4. You are the assistant leader of a weekend Sierra snow practice/checkoff, camped two miles from the cars. During ice axe practice the leader, in demonstrating a head-first-on-the-back arrest, builds up too much speed, is severely jarred, cannot complete his arrest, and comes to a stop in the soft snow of the runout. You are first to reach him. It appears he may have been unconscious briefly; he is at first disoriented, but after a short time he insists he is okay. He also insists that you go away and finish running the arrest practice; he says he will sit awhile and rejoin the group in a few minutes. Describe what you would do.
  5. Your party of 4 has made it to the top of a 12,000' Sierra peak at 3:00pm in mid-September after hiking since early morning to get there. Near the summit one member of the group falls. In addition to cuts and bruises, he has a fractured humerus (upper arm). What do you do?

6. During the first third of the descent phase of an all-day climb in the local mountains, your party of 12 gets strung out, and when you consolidate them 15 minutes later, you discover that two people are missing. There was an unmarked trail junction about 10 minutes back where they probably went wrong. The other trail is a use trail that goes down a ridge to a dirt road about 5 miles from the cars. One of the two missing persons is an experienced hiker but does not have a map or compass with him and probably does not know this area well. What would you do?
7. You are leading a party through a thick, trailless forest, navigating by map, compass, and altimeter. No distant landmarks are visible. At one rest stop an experienced mountaineer pulls out his map and says he thinks you are following the wrong river branch. He convinces several others that you may be wrong. They want to take off cross-country in a direction which will take them to the correct river branch if indeed you are in the wrong spot. You are almost, but not 100%, positive you are on the correct course. What would you do?
8. On the second day of a Sierra spring weekend ski tour, you are at a rest stop on your way back to the cars. The assistant leader straggles in, saying there is one person behind him. After another 20 minutes, she still hasn't shown up. It is now 2:30pm. You face three hours of ski travel back to the roadhead and a 5 hour drive home. It will be dark by 8. The 20 participants are anxious to go; some look as though they are about to put on their packs and leave. What do you do?
9. The plan for a 3 day trip is to backpack to a lake 10 miles from the road head, climb a peak, return to the lake for the second night and then pack out on the third day. Three miles from the start you discover that one of the participants is already weak, tired, and lagging behind the rest of the group. Describe two possible options. Explain your choice of one option.
10. You are leading a group of 10 up the steep chute on Mt Mills, which is full of loose scree. The climb requires use of a rope to get over a large chock stone near the bottom of the chute. How would you move the group up and down this chute to minimize the danger of rock fall?
11. You are leading a mixed group of SPS members and WTC students with appropriate rock experience on a climb of Dragon Peak. At the bottom of the 50-foot class 4 diagonal crack, 3 WTC students dare each other to free climb the crack. You are at the top of the crack with your belay rope. What would you do?