

Professional Foresters Registration Examination, April 2026

PART I

Instructions: APPLICANTS, PLEASE READ THESE INSTRUCTIONS

CAREFULLY. You MAY complete PART I by:

ANSWERING any Three (3) of Questions I through V.

**Question I Short Answer
Question II - Forest Ecology
Question III - Forest Economics
Question IV- Silviculture
Question V - Forest Protection**

Professional Foresters Registration
715 P Street, 10th Floor,
Sacramento, CA 95814

ACRONYMS AND ABBREVIATIONS USED IN THIS EXAMINATION

The following Acronyms and /or Abbreviations **may be used** in this examination. Technical abbreviations that should be known by a forester are NOT included here (e.g., DBH, MAI, MBF). You may remove this page for reference throughout this examination. **It need not be returned.**

<u>Acronym or Abbreviation</u>	<u>Full Text</u>
BLM	Bureau of Land Management, USDI
BOF	California State Board of Forestry and Fire Protection
CA	California
CCR	California Code of Regulations
CAL FIRE	California Dept. of Forestry and Fire Protection
CDF&W	California Department of Fish and Wildlife
FPR	California Forest Practice Rules
PRC	California Public Resources Code
RPF	California Registered Professional Forester
THP	California Timber Harvest Plan
TPZ	California Timber Production Zone
USFS	United States Forest Service, USDA

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 1. What is a Genotype?

3% 2. List three (3) Pathogens that can adversely affect cones and seeds of conifers in California.

4% 3. What is an economic Tariff? Who pays a Tariff?

4% 4. Define Magnetic Declination

3% 5. As an RPF, what must you do if it becomes necessary to discontinue services for a THP you oversee?

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 6. **According to the FPRs and PRC, what is a watercourse?**

4% 7. **What are the duties of an RPF to their clients with regard to the truthfulness and completeness of their statements and actions?**

4% 8. **What are the duties of an RPF to third parties with regard to the truthfulness and completeness of their statements?**

3% 9. **What is Free Trade?.**

3% 10. **When describing road standards, explain what is meant by PHYSICAL standards?**

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 11. **What is road Reconnaissance?**

3% 12. **What ethical duty do you owe to the “real party of interest” in your agreement to prepare a THP?**

3% 13. **In the U.S., how is the price of softwood lumber determined??**

3% 14. **Forestry has been described as the science and art of managing forests. What is science and what is its role in forestry?**

3% 15. **Forestry has been described as the science and art of managing forests. What is the role of art in forestry?**

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 16. **What is herbivory in large animals?**

3% 17. **What is an AUM (animal unit month)?**

3% 18. **You have been doing THP fieldwork near a lake following a strong windstorm. You find a very large bird nest on the ground near a clump of recently downed tall snags. The nest is comprised of large to small sticks and contains a variety of odd items (tin cans bottles, rope, shells) and three oval broken pinkish-white eggs about 2 inches long. What have you likely found and what should you do?**

3% 19. **What is ecosystem management?**

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 20. **As used in wildlife management, what is horizontal diversity?**

3% 21. **What is adaptive management?**

3% 22. **What is nonpoint source pollution? State an example.**

3% 23. **What is range management?**

4% 24. **What is the natural range of Variation within an ecosystem?**

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

3% 25. Name three (3) types of deductions (not defects) taken by log scalers for observable defects.

4% 26. In the FPRs, what does “While Giving Consideration mean”?

3% 27. In managing forest roads, what is a Stable Operating Surface?

3% 28. In managing a THP, what are Minor Deviations?

3% 29. What is a Thalweg Riffle Crest?

Applicant #: _____

Question # I

Answer on these pages, tear from the exam and submit with the answer packet if you chose to answer Question I of this examination.

4% 30. **For a RPF, what is a Supervised Designee and how are they managed?**

3% 31. **What are Predominant Trees?**

End of Short Answer Question #1

QUESTION II - FOREST ECOLOGY

OBJECTIVE

To demonstrate your understanding of forest recovery, rehabilitation, and restoration after large scale mixed intensity fire.

SITUATION

Assume you are a new RPF employed by a family forest landowner whose extensive holdings lie partially within a recent large scale fire perimeter. The family has gathered to ask you questions about the process of fire aftermath. You explain that timber salvage operations must begin as soon as possible. Some family members are concerned about recovery and rehabilitation of their forest apart from salvage. You answer the following questions about what to do other than salvage harvesting.

QUESTIONS

10% 1. What do you do first? What do we do first? How do we obtain our own information about how the fire affected our land?

10% total 2. Our land is partially adjacent to the area of the fire managed by US Forest Service.

(5%) 2a. What type of monitoring and mitigation does the US Forest Service perform post fire? Describe what kind of resources they can provide that could be useful to you in evaluating our land?

(5%) 2b. Are other public agencies able to provide assistance with initial recovery and rehabilitation?

10% 3. Please describe the basic process you will follow to assess fire effects on our forest that require emergency action.

10% 4. Please describe the basic process you will follow to assess fire effects on our forest that warrant rehabilitation.

10% 5. Please describe what mixed intensity fire means. First you explain burn intensity then describe three levels of intensity and their effect on tree vegetation.

25% 6. When it becomes time to consider erosion control discuss four (4) types of Hillslope erosion control you will consider. Where is it needed most? How does each control method function to mitigate erosion?

25% 7. Please describe how you will assess surface burn severity. You produce and explain the following table to describe the effect of burn severity on the forest ground cover and soil.

Complete the table on the following page and return with your answer.

End of Question

Complete table on the next pages, tear from the booklet and submit with your answers.

Applicant #: _____ Question 2, #7

Table 1. Burn severity classification.			
Soil and Litter Parameters	Burn severity Effects		
	Low	Moderate	High
Surface Organic Horizons (litter, humus, and rotten wood)			
Small Woody Debris (<3" diameter)			
Large Woody Debris (>3" diameter)			
Stumps			
Mineral Soil/Ash			
Indicators:			
Soil Organisms			
Nutrient Status			
Water Repellant Layers			
Erosion Potential			

Use additional table if you need extra space or revisions

Table 1. Burn severity classification.

Soil and Litter Parameters	Burn severity Effects		
	Low	Moderate	High
Surface Organic Horizons (litter, humus, and rotten wood)			
Small Woody Debris (<3" diameter)			
Large Woody Debris (>3" diameter)			
Stumps			
Mineral Soil/Ash			
Indicators:			
Soil Organisms			
Nutrient Status			
Water Repellant Layers			
Erosion Potential			

QUESTION III – FOREST ECONOMICS

OBJECTIVE: To demonstrate your understanding of basic forest economics principles and how forest practice regulations may affect a property's value.

SITUATION: Imagine that a proposal has been made for a California state regulation that would prohibit the harvesting of privately owned timber within 300 feet of all Class I watercourses (except permitted road crossings) for all interior commercial forests. You have been asked to estimate the financial change (gain or loss) to a particular private owner in the Sierra Nevada Mixed Conifer zone (before income taxes) if this proposal was to become law.

QUESTIONS:

- | | |
|-----|---|
| 50% | 1. Describe the general method of economic analysis that you would use to determine the potential financial change to a forest owner of one such stand which contains a Class I watercourse. List the major steps that you would follow to perform the analysis. |
| 25% | 2. List and briefly describe the types of data that you would need to make your evaluation. |
| 25% | 3. Describe how, in your financial calculation, you would handle risk. Give an example of how to handle risk of fire in your financial calculation. |

END OF QUESTION

QUESTION IV - SILVICULTURE

OBJECTIVE

This question is designed to allow you to demonstrate your ability to describe and understand forest stand conditions, then select and justify a site specific silvicultural system that will meet the intent of the California Forest Practice Act.

SITUATION

Given the objective described above, be specific in stating your assumptions and answers. The answers should demonstrate technical competence and be clear enough to be understood by agency professionals and the public. This is exactly what is required of an RPF when submitting a THP.

QUESTION

10 % 1. Define the term "**stand structure**".

20 % 2. Describe the "structure" of **FOUR (4)** of the following general stand types. (Graphs or diagrams are acceptable.)

Even-aged
Uneven-aged
Storied
Irregular
Even-aged Group
Reserve

20 % 3 a. For each of the **four (4)** stand structures you described above, list **all of the regeneration method(s) and intermediate treatments** as found in the California Forest Practice Rules which are usually most appropriate for maintaining or achieving maximum sustained production of wood. (Note: When more than one regeneration method or intermediate treatment is appropriate for a particular stand structure list them all.) **DO NOT USE ALTERNATIVE PRESCRIPTION**)

30 % 3 b. Also, **for each stand structure** you described use one of your listed **regeneration methods** to briefly describe and explain how the regeneration method relates to achieving or maintaining that structure.

10 % 4. Define the term "**stand composition**" and how it is **quantitatively** expressed.

10 % 5. What do the California Forest Practice Rules require or suggest about **stand composition** after harvest in order to meet post-harvest stocking standards?

End of Question

QUESTION V - FOREST PROTECTION

OBJECTIVE To demonstrate your ability to assess forest health and to craft management alternatives available to California RPFs.

QUESTIONS

- 30% 1. The definition of “dying” trees includes those trees “judged to be dead within one year by an RPF”. Briefly describe the most significant **six (6) visible** features of trees or their environment you might look for when trying to judge if commercial conifer sawtimber will be dead within one year.
- 10% 2. How do hardwoods differ from conifers when trying to judge probability of mortality? What are some similarities?
- 40% 3. Name **Four (4)** possible “abiotic agents” (NOT biological) in nature which may cause significant damage to conifers. Briefly describe one or more sources of the agent, type(s) of damage from each agent, and how serious the damage is likely to be (chance tree would die or recover, lasting effects).

Confine the answers to the direct types of damage; do not take analysis out to secondary insect or pathogen attacks. However, do consider trees of different ages (seedlings to mature) and of different species in your responses.

- 20% 4. Briefly describe **two (2)** actions that can be taken under the Forest Practice Rules that will generally allow for the harvesting of dead and dying trees to begin within two weeks of submission of paperwork. Include what RPF responsibilities exist, if any, in implementing these actions.

END OF QUESTION

END OF PART I

INSTRUCTIONS: APPLICANTS, PLEASE READ THESE INSTRUCTIONS CAREFULLY.

You MAY complete PART II by:

ANSWERING any Three (3) of Questions VI through X.

**VI- Forest Mensuration
VII- Forest Administration
VIII- Engineering
IX- Forest Policy
X- Forest Management**

QUESTION VI-FOREST MENSURATION

OBJECTIVE

To demonstrate your ability to describe fundamental mensuration principles and explain their relative importance.

SITUATION

Consider yourself to be an inventory forester for the Small Time Timber Co. The firm's president recently hired a young accountant. The accountant has asked you to answer certain questions about a recent point sampling cruise that you conducted in a mature stand of Douglas- fir. After talking with this young man for a few minutes, you realize that his questions are somewhat naive and that he knows very little about forestry, timber cruising, or statistics. Therefore, you decide that your answers must be very thorough and specific. Please answer each of the following questions for the accountant.

QUESTIONS

15% 1. "You say that you sampled 30 points/plots and used a BAF (basal area factor) of 30. What do you mean by points/plots? What is a BAF? What is this percent cruise intensity?"

15% 2. "You say that the average stand basal area was 300 square feet per acre. What does this mean? How did you calculate it? On the average, how many trees per point would it take to get 300 square feet per acre? Is 300 square feet per acre good or bad stocking?" Explain your answer.

15% 3. "You say that the average tree in your stand has a net V-BAR (Volume- basal area ratio) of 33.0 (based on cubic feet to a 4-inch top). What is the net volume per acre and how do you calculate it? Does the V-BAR change with the age of the stand? If so, why?"

15% 4. "If you sampled a tree that had a DBH of 24 inches, how much basal area does this represent? How many trees per acre would a sampled 24 inch DBH tree represent?"

20% 5. "You say that each tree measured during the cruise represents the same amount of basal area per acre no matter how big the tree is. That doesn't make sense to me. Can you explain why this is so?"

20% 6. "You say that your net volume standard error was 12 percent. What kind of error is this? Why did it occur? What does it mean about the reliability of your work? How can it be avoided in the future?"

END OF QUESTION

QUESTION VII- FOREST ADMINISTRATION

OBJECTIVE

To demonstrate your understanding of the environmental documentation required of Registered Professional Foresters by the CA Forest Practice Rules when preparing THP's.

QUESTIONS

15% **1.** The Forest Practice Rules and Regulations, Section 897(b)(1), states: "the goal of forest management on a specific ownership shall be the production or maintenance of forests which are healthy and naturally diverse, with a mixture of trees and understory plants, in which trees are grown primarily for the production of high quality timber products".

The CCR [897(b)(1)] further lists five broad objectives that the CALFIRE Director can use as a basis to determine whether a THP conforms to the intent of the Forest Practice Act.

State **THREE** (3) of those objectives.

20% **2.** In general terms, briefly discuss what steps the Forest Practice Rules require of the RPF with regard to probable adverse environmental effects associated with a THP being prepared?

20% **3.** Briefly discuss the specific "environmental" or physical information required, in the THP, for **ONE** (1) of the following THP categories:

- a. Harvesting practices
- b. Watercourse and lakes
- c. Wildlife

45% **4. SCENARIO: You have been tasked with preparing a THP**

The area covers 120 acres of TPZ forestland supporting second growth mid-site commercial conifers and hardwoods. The landowner must pay off medical debts of \$250,000 and \$300,000 grandchildren educational expenses from revenue generated through timber harvest.

A Class I watercourse flows down the center of the property and two small tributaries flow to the main stem through the property. A downstream neighbor has used one of these tributaries over 15 years for domestic water. The other tributary carries noticeable sediment after light rains from eroded material on an old rotational slump activated by historic railroad logging.

You have found an old railroad grade that would serve as an ideal truck road to the harvest unit you are proposing. The existing wooden trestle crossing one of the tributary watercourses must be replaced with a rail car bridge to facilitate truck traffic into the watershed.

A popular swimming hole is on the main stem within the property.

Neighbors have sighted a bald eagle foraging along this watercourse. The landowner is unaware of any nest sites in the area.

The local elementary school yard is adjacent to the only haul route for timber products from this property to nearby mills.

Assume: Stand age is 60 years; MAI 600 bd ft/ac/yr.; stumpage value \$400/mbf

Using the above scenario, develop **ONE (1) SHORT RESPONSE** to **EACH** of these **Eight (8)** categories of potential cumulative impacts as part of the assessment process for a THP you are preparing. Consider the information given in the scenario, state any assumptions, explain and justify your response. The eight categories are: Watershed, Soil Productivity, Biological, Recreation, Visual & Aesthetics, Traffic, Cultural, Greenhouse Gasses, Wildfire Risk and Hazard (from Technical Rule Addendum #2)

END OF QUESTION

QUESTION VIII- ENGINEERING

OBJECTIVE:

To demonstrate your understanding of forest engineering activities related to harvesting and associated land management activities.

QUESTIONS:

1. **55% Total** Tractor, Highlead, Skyline, Cut-to-Length Harvester, and Helicopter Yarding are five of the harvesting systems that may be considered in developing the logging plan for a Timber Harvesting Plan. Develop a matrix answer for this question.

(15%) A. Briefly discuss each of these yarding systems as to their suitability for a partial-cut harvest. Also discuss any terrain limitations that may preclude the system's use or severely limit its use. If certain equipment or techniques are required to do a partial-cut harvest, be sure to describe this equipment.

(20%) B. List two (2) ways each logging system might cause potential damage to resources and include one reasonable mitigation of that potential damage.

(20%) C. For each harvesting system, discuss two (2) advantageous circumstances which would favor that logging system and the relative economic factor(s) which would favor the use of each system for partial cutting.

2. **30% Total** The state of California has a Surface Soil Erosion Hazard Rating system with which RPF's should be familiar.

(4%) 2 A. State the four (4) significant factors which are used in the development of the rating.

(6%) 2 B. Give a brief description of the process for arriving at the rating.

(20%) 2 C. Assuming a timber harvest unit has an Extreme EHR, give four (4) possible THP regulatory impacts on road design-construction and four (4) possible THP regulatory impacts on the choice and implementation of silvicultural/harvesting methods?

3. 15% Total Today some forest landowners are implementing Road Management Plans to decrease soil erosion and improve water quality for salmonid habitat.

(5%) 3 A. Describe what is meant by a “Road Management Plan”

(10%) 3 B. List and briefly discuss five (5) methods, techniques, or management changes which are commonly being built into such Road Plans.

END OF QUESTION

Question IX Forest Policy

OBJECTIVE:

To demonstrate understanding of public policy in limiting or facilitating the use of ecologically appropriate forest prescribed fire. Things change. When climate change and catastrophic fires induce a shift in public sentiment, legislators and agencies often respond with policy changes. RPFs must be prepared to adapt to those policy changes.

QUESTIONS:

1. In October 2020, Governor Newsom signed Executive Order N-82-20, directing state agencies to accelerate actions to combat climate change, protect biodiversity, and build resilience through nature-based solutions.

“For the state’s forested landscapes, state agencies will promote landscape-scale forest management that safely reintroduce fire back on the landscape, support native species that depend upon fire to thrive...

Increased ecologically appropriate prescribed fire will also be important elements of the Climate Smart Strategy and Scoping Plan Update. Although these treatments will decrease forest carbon pools in the near term, in the long run, they will reduce forest density, promote the growth of larger, more fire-resistant trees, and create a mosaic of forests that are less vulnerable to uncontrolled wildfire and climate change.”

This led to the development of a Strategic Plan for Prescribed Fire, Cultural Burning, and Prescribed Natural Fire. In California’s Strategic Plan, how are the following terms defined and discussed?

45% Total 1 What is Fire?

(5%) 1.a. What is Beneficial Fire?

(10%) 1.b. How is Prescribed Fire consistent with California policy? What are its purposes?

(10%) 1.c. What is Cultural burning?

(10%) 1.d. Briefly describe the history, purposes, and the colonial, federal and state prohibition of Cultural burning in California.

(5%) 1.e. What is managed wildfire as used on Federal Lands?

(5%) 1.f. What is Pyrodiversity? Why is it important for forest stability?

Continued next page

15% 2. List three (3) recent policy and plans by CALFIRE or the State Board of Forestry and Fire Protection intended to increase acceptance of Prescribed fire use. Briefly describe how they are **intended** to affect prescribed burning. Do **not** use the Strategic Plan for Prescribed Fire, Cultural Burning, and Prescribed Natural Fire.

10 % 3. There are over 27 California prescribed burn associations. What is a California prescribed burn association? Describe how they are formed and function.

5% 4. What is the Fire Network for the University of California Agriculture and Natural Resources?

25% Total 5. In October 2021, California adopted SB 332, Dodd. Civil liability: prescribed burning operations: gross negligence. Not liable so long as following specific conditions were met:

- Purpose of burn is for ecological maintenance and restoration, fuel reduction, cultural burning, silviculture or agriculture
- Certified burn boss has written a burn plan
- Burn is conducted in compliance with burn plan prescription
- The burning entity has written permission from the landowner to burn
- Burn is conducted in compliance with any burn or air quality permits required

(10%) 5.a. How would this bill enable **more** use of ecologically appropriate forest prescribed fire?

(15%) 5.b. Advocates for prescribed burns say SB 332 is just one piece of the puzzle in creating a more welcoming environment for burns on privately owned land. Other than the fear of liability the bill seeks to address, **discuss three (3) other legal, policy, regulatory, permitting, or liability obstacles that are not covered in the bill and potential solutions to increased forest prescribed fire.**

(END OF QUESTION

Question X-Forest Management

OBJECTIVE:

Demonstrate your understanding of the contractual features of temporary road use agreements and the responsibilities for roads under a Timber Harvest Plan (THP).

SITUATION:

As an RPF you have a client who is a forest landowner. An adjacent landowner wishes to harvest timber on their neighboring property but must gain access across your client's land. The appropriate road is already in place on your CLIENT'S property. Both properties are private TIMBERLAND.

QUESTIONS:

70% **1. List and explain ten (10) essential** provisions you should include in the temporary road use agreement to protect your client's interest.

10% **2.** What is the responsibility of any Timberland Owner pertaining to road construction and maintenance on his own property?

10% **3.** Under what circumstance is the Timber Operator (LTO) responsible for the construction and maintenance of roads under a THP?

10% **4.** Is it within the RPF scope of practice to develop or review a temporary road use agreement?

(END OF QUESTION)

End of Exam