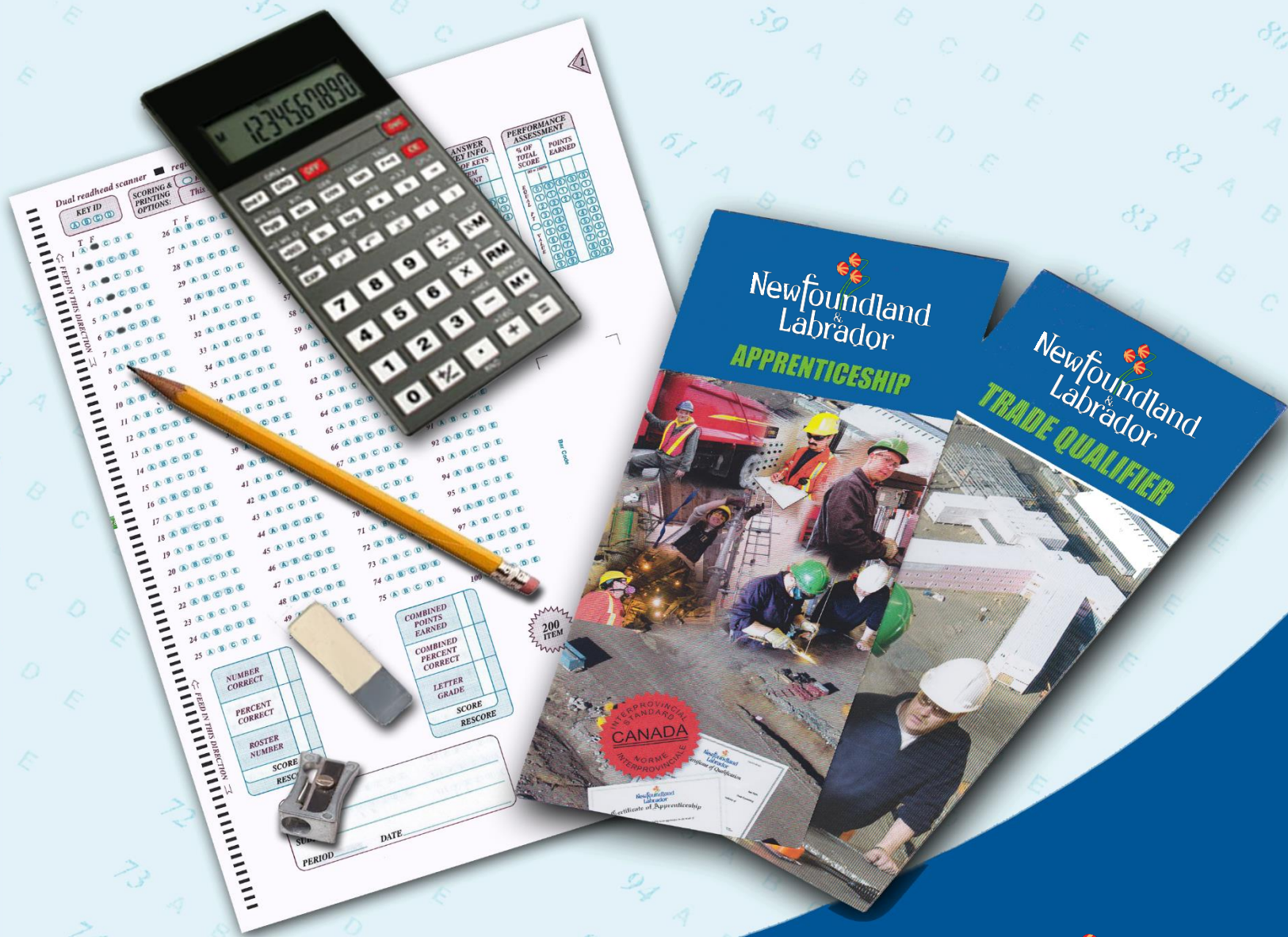


# APPRENTICESHIP & CERTIFICATION

## Study Guide Steamfitter/Pipefitter



# **Apprenticeship and Certification**

## **Study Guide**

# **Steamfitter/Pipefitter**

**(Based on Red Seal Occupational Standard – RSOS 2015)**

Government of Newfoundland and Labrador  
Department of Immigration, Population Growth and Skills

**Version 11**

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## Introduction

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This Study Guide has been developed by the Newfoundland and Labrador Department of Immigration, Population Growth and Skills, Apprenticeship and Trades Certification Division, to assist apprentices and trade qualifiers as they prepare to write the Inter-provincial (IP) Red Seal Exam. IP Exams are available for all Red Seal trades. For a list of Inter-provincial trades please refer to the Department of Immigration, Population Growth and Skills website: <https://www.gov.nl.ca/atcd/designated-trades/list-of-designated-trades/>

### Some of the specific goals of this guide are:

- ⇒ to help you understand the skills and knowledge that might be covered on the exam
- ⇒ to help you identify your strengths and weaknesses
- ⇒ to provide organization and structure for a course of study
- ⇒ to provide a list of resources to help you with your study plan
- ⇒ to support and supplement the teaching and learning process

This study guide outlines the theoretical portion of the program. The intent is not to replace technical training provided under the guidance of instructors. Rather, it is a tool to be used in conjunction with formal training.



## Exam Process

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### Before the Exam

You must contact the nearest Apprenticeship and Trades Certification Divisional office to make request to write the IP Red Seal exam (*See Appendix A for a list of regional offices*). Upon approval, the Apprenticeship Program Officer (APO) will notify you of your eligibility to write the exam, and provide you with scheduling information. If you require special accommodations due to a disability or language barrier, please contact your regional office for information on applying for this service.

### During the Exam

**You must bring:**

- personal identification such as a photo or signature ID or valid Newfoundland and Labrador driver's license
- your notification letter

**The following will be provided:**

- a calculator (*see Appendix B for calculator information*)
- all other items required such as pencils, scrap paper, etc.

**Important Note:**

Personal cell phones, calculators, or other electronic equipment are NOT allowed into the exam room. If you do bring them, they will be stored away and returned to you when you have completed the exam.

### After the Exam

Results will be mailed to you approximately seven to ten days after completion of the exam. All necessary instructions and information will be provided in the results letter.

The percentage mark you obtained will be provided. You will also be given a section by section breakdown, showing how many questions were in each section, as well as the number of questions in each section you completed successfully.

If you are successful in obtaining a 70% or more on your exam, you will be issued a Newfoundland and Labrador Certificate of Qualification with a Red Seal endorsement.



## Exam Format

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All IP Red Seal exams are written in multiple-choice format. Each exam has between 100 and 150 questions. A multiple-choice question consists of a stem (a complete question) followed by four options (A, B, C, D). The stem contains all the information necessary to answer the question. The options consist of the one correct answer and three “distracters.” Distracters are incorrect. (See Appendix C for a sample answer sheet).

IP Red Seal exams contain three types of questions:

### Level 1 Knowledge and Recall

Questions at this level test your ability to recall and understand definitions, facts, and principles.

### Level 2 Procedural and Application

Questions at this level test your ability to apply your knowledge of procedures to a new situation.

### Level 3 Critical Thinking

Questions at this level test your ability to interpret data, solve problems and arrive at valid conclusions.

#### Level 1 Examples:

1. Which of the following products on fire would require a class C extinguisher?
  - A. energized or live electrical equipment
  - B. magnesium, titanium sodium acetylene or natural gas
  - C. wood or paper or clothe energized or live electrical equipment
  - D. acetylene or natural gas



2. What is the maximum allowable pressure on the outlet of a standpipe system?

- A. 60 psi.
- B. 80 psi.
- C. 100 psi.
- D. 110 psi.



3. What WHMIS class does this symbol represent?

- A. Class C.
- B. Class D.
- C. Class E.
- D. Class F.



### Level 2 Examples:

1. What is the definition of "latent heat of vaporization"?

- A. The highest temperature at which a gas may be liquefied regardless of how much liquid is applied to it.
- B. The amount of heat required to change a liquid to a gas without changing its temperature.
- C. The amount of heat that must be added to a substance to change it from a solid to a vapour with no evidence of going through the liquid state.
- D. The amount of heat required to change a substance from a solid to a liquid with no change in temperature.



2. During a shutdown what is an alternative to blinding while working on a pipeline?
- A. Ensure that the plant operators have safely turned off all pumps.
  - B. Use a plumber's test plug.
  - C. Use a method of pipe isolation called "double block and bleed".
  - D. Test the air prior to the work commences and on a regular basis during the work.

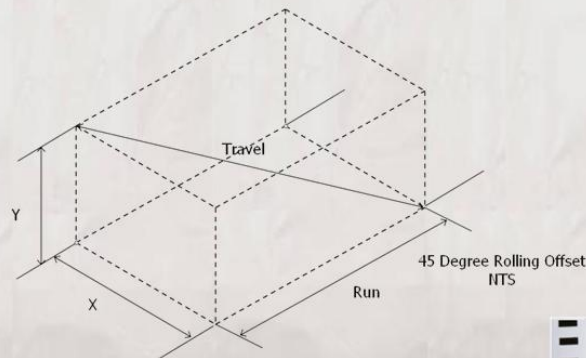


3. When looking at a Class 1 standpipe system, how can it be easily identified?
- A. 2 1/2" valve/hose connection
  - B. 1 1/2" and 2 1/2" valve/hose connections
  - C. 1 1/2" valve/hose connection
  - D. Siamese connection



**Level 3 Examples:**

1. Refer to the following diagram. Calculate the center to center travel between the fittings when Y = 100 and X = 300. What is the center to center travel between the 45 degree fittings?



- A. 141 mm.
- B. 304 mm.
- C. 316 mm.
- D. 346 mm.



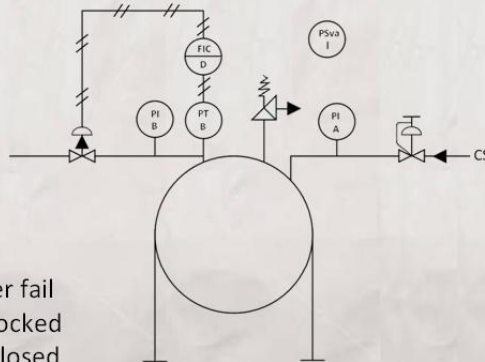


2. A circuit has 24 volts and a resistance draw of 150 ohms. Using Ohm's law, what is the amperage?

- A. 0.16 amps
- B. 6.25 amps
- C. 1800 amps
- D. 3600 amps



3. What will happen to the pneumatic control valve in the storage tank pressure control system shown in the diagram below?



- A. It will never fail
- B. It will fail locked
- C. It will fail closed
- D. It will fail open



**Source of questions:**

<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=230>

## Exam Content

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### Understanding the *Red Seal Occupational Standard (RSOS)*

The Red Seal model has historically been based on the development of the National Occupational Analysis (NOA), which supports the development of multiple-choice format examinations.

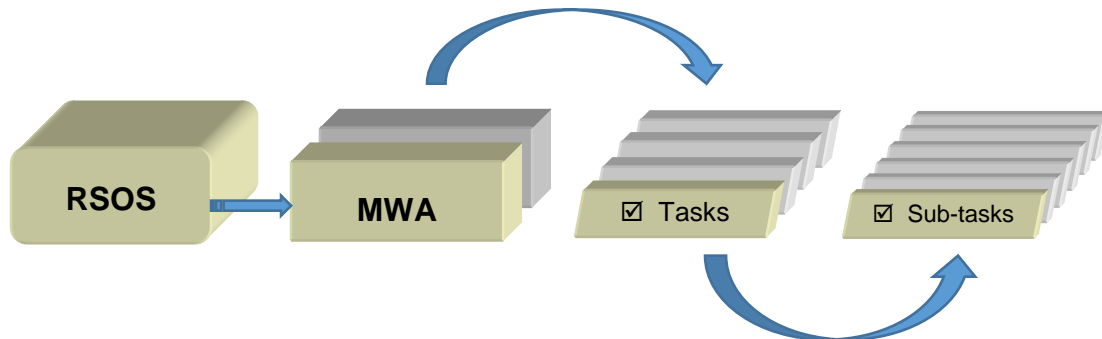
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Inter-provincial Examination is based on the Red Seal Standard.

The new standards provide greater consistency in learning resources and allow for increased industry involvement in the development of these standards. This new model places increases emphasis on apprenticeship training and assessing skills with industry learning objectives, outcomes and performance criteria.

The RSOS for each trade describes the tasks and sub-tasks; skills and knowledge requirements; summary of essential skills; safety information; trends affecting the trade; technical terms; names of tools and equipment; acronyms; learning objectives and outcomes; industry expected performance and essential skills related to each sub-task.

The RSOS is an excellent tool to use as you study for the Red Seal exam. RSOSs can be found at <http://www.red-seal.ca/resources/n.4.1-eng.html>

RSOS material is organized into the following categories: **MWA (Major Working Activity)**. The MWAs are further broken down into **TASKS** (*describes activities within an MWA*) and **SUB-TASKS** (*describe activities within a task – This is what the exam is based on*).

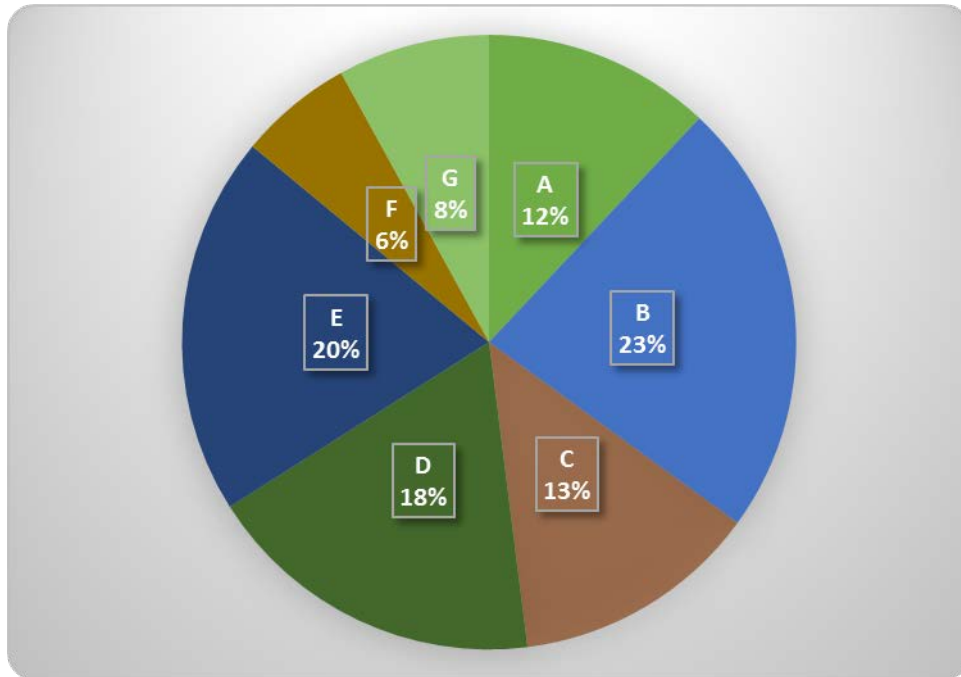


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

## RSOS Pie Chart

The RSOS Pie Chart presents the MWA percentages in the form of a pie chart which tells you the approximate number of questions from each MWA. For example, **12%** of the questions on the **Steamfitter/Pipefitter** Exam will be based on **MWA A**.

### STEAMFITTER/PIPEFITTER



MWA Titles			
<b>MWA A</b>	Performs Common Occupational Skills	<b>MWA E</b>	Installs, Tests, Maintains, Troubleshoots and Repairs Heating, Cooling and Process Piping Systems
<b>MWA B</b>	Performs Layout, Fabrication and Piping Installation	<b>MWA F</b>	Installs, Tests, Maintains, Troubleshoots and repairs Renewable Energy Systems
<b>MWA C</b>	Performs Rigging, Hoisting, Lifting and Positioning	<b>MWA G</b>	Performs Commissioning, Start-up and Turnover
<b>MWA D</b>	Installs, Tests, Maintains, Troubleshoots and Repairs Low and High Pressure Steam and Condensate Systems		

## Exam Breakdown

The **Steamfitter/Pipefitter** exam currently has 130 questions. The following table shows a breakdown of the approximate number of questions that come from each RSOS MWA. It is important to note that the number of questions can change at any time. When you are ready to write your exam you may contact your regional office to verify the number of questions (See Appendix A).

		# of Questions
<b>MWA A</b>	<b>Performs Common Occupational Skills</b>	<b>16</b>
<b>Task 1</b>	Performs safety-related functions	
<b>Task 2</b>	Uses and maintains tools and equipment	
<b>Task 3</b>	Organizes job	
<b>MWA B</b>	<b>Performs Layout, Fabrication and Piping Installation</b>	<b>29</b>
<b>Task 4</b>	Performs fabrication	
<b>Task 5</b>	Lays out, identifies and installs piping, tubing, fittings and related components	
<b>Task 6</b>	Installs, maintains, troubleshoots, repairs and tests valves	
<b>Task 7</b>	Installs, tests, maintains, troubleshoots and repairs heat tracing systems	
<b>MWA C</b>	<b>Performs Rigging, Hoisting, Lifting and Positioning</b>	<b>17</b>
<b>Task 8</b>	Performs common rigging, hoisting, lifting and positioning	
<b>Task 9</b>	Performs complex and critical rigging, hoisting, lifting and positioning	
<b>MWA D</b>	<b>Installs, Tests, Maintains, Troubleshoots and Repairs Low and High Pressure Steam and Condensate Systems</b>	<b>24</b>
<b>Task 10</b>	Installs, tests, maintains, troubleshoots and repairs low pressure steam and condensate systems	
<b>Task 11</b>	Installs, tests, maintains, troubleshoots and repairs high pressure steam and condensate systems	
<b>MWA E</b>	<b>Installs, Tests, Maintains, Troubleshoots and Repairs Heating, Cooling and Process Piping Systems</b>	<b>26</b>
<b>Task 12</b>	Installs, tests, maintains, troubleshoots and repairs hydronic systems	
<b>Task 13</b>	Installs, tests, maintains, troubleshoots and repairs process piping systems	
<b>Task 14</b>	Installs, tests, maintains, troubleshoots and repairs industrial water and waste treatment systems	
<b>Task 15</b>	Installs, tests, maintains, troubleshoots and repairs hydraulic systems	
<b>Task 16</b>	Installs, tests, maintains, troubleshoots and repairs heating, ventilation, air conditioning and refrigeration (HVACR) systems	
<b>Task 17</b>	Installs, tests, maintains, troubleshoots and repairs fuel systems	
<b>Task 18</b>	Installs, tests, maintains, troubleshoots and repairs medical gas systems	
<b>Task 19</b>	Installs, tests, maintains, troubleshoots and repairs compressed air and pneumatic systems	
<b>Task 20</b>	Installs and tests fire protection systems. NCC	
<b>MWA F</b>	<b>Installs, Tests, Maintains, Troubleshoots and Repairs Renewable Energy Systems</b>	<b>7</b>
<b>Task 21</b>	Installs, tests, maintains, troubleshoots and repairs geo-exchange and geothermal systems	
<b>Task 22</b>	Installs, tests, maintains, troubleshoots and repairs solar heating systems	
<b>Task 23</b>	Installs, tests, maintains, troubleshoots and repairs heat recovery systems	
<b>MWA G</b>	<b>Performs Commissioning, Start-Up and Turnover</b>	<b>11</b>
<b>Task 24</b>	Prepares system for commissioning, start-up and turnover	
<b>Task 25</b>	Commissions systems	
<b>Total</b>		<b>130</b>

## RSOS Sub-tasks

The following *RSOS Task Profile Checklist* outlines the MWAs, tasks and sub-tasks for your trade. The IP Red Seal exam is written to test your knowledge and abilities regarding the sub-tasks in the RSOS. This chart can be used to review your current knowledge. You can review by placing a checkmark (✓) next to those you understand fully.

Place your focus on those you do not understand and study them until you are comfortable with the material. Think of possible questions in that particular content area.

The RSOS also contains a list of “supporting knowledge and abilities” for each sub-task. They are the skills and knowledge you must have to perform a sub-task. The supporting knowledge and abilities identified under each sub-task will be very helpful as you review. The list can be found in the RSOS, on the Red Seal website, for your trade.



**Task Profile Checklist  
Based on 2015 RSOS  
Steamfitter/Pipefitter**

**MWA A: Performs Common Occupational Skills**

**Task 1: Performs Safety-Related Functions**

*Sub-Tasks*

- Maintains safe work environment
- Selects, inspects and uses personal protective equipment (PPE) and safety equipment
- Follows lock-out procedures

**Task 2: Uses and Maintains Tools and Equipment**

*Sub-Tasks*

- Uses common tools and equipment
- Uses access equipment
- Uses welding equipment
- Uses soldering and brazing equipment
- Uses oxy-fuel equipment

**Task 3: Organizes Job**

*Sub-Tasks*

- Plans work
- Generates drawings
- Interprets drawings and specifications
- Develops piping templates
- Performs preliminary quality control functions

**MWA B: Performs Layout, Fabrication and Piping Installation**

**Task 4: Performs Fabrication**

*Sub-Tasks*

- Fabricates piping system components
- Fabricates brackets, supports, hangers, guides and anchors

## MWA B: Performs Layout, Fabrication and Piping Installation (Cont'd)

### Task 5: Lays out, Identifies and Installs Piping, Tubing, Fittings and Related Components

#### Sub-Tasks

- Lays out, identifies and installs copper piping, tubing, fittings and related components
- Lays out, identifies and installs plastic piping, tubing, fittings and related components
- Lays out, identifies and installs carbon steel piping, tubing, fittings and related components
- Lays out, identifies and installs stainless steel piping, tubing, fittings and related components
- Lays out, identifies and installs fiberglass piping, fittings and related components
- Lays out, identifies and installs specialty piping, fittings and related components

### Task 6: Installs, Maintains, Troubleshoots, Repairs and Tests Valves

#### Sub-Tasks

- Installs valves
- Maintains, troubleshoots, repairs and tests valves

### Task 7: Installs, Tests, Maintains, Troubleshoots and Repairs Heat Tracing Systems

#### Sub-Tasks

- Installs steam tracing systems
- Maintains, troubleshoots, repairs and tests steam tracing systems
- Installs liquid-filled tracing systems
- Maintains, troubleshoots, repairs and tests liquid-filled tracing systems

## MWA C: Performs Riggings, Hoisting, Lifting and Positioning

### Task 8: Performs Common Rigging, Hoisting, Lifting and Positioning

Sub-Tasks

- Determines load
- Prepares lift plan(s)
- Selects riggings, hoisting, lifting and positioning equipment
- Inspects riggings, hoisting, lifting and positioning equipment
- Secures lift area
- Sets up rigging, hoisting, lifting and positioning equipment
- Performs lift and positioning
- Maintains and stores rigging, hoisting, lifting and positioning equipment

### Task 9: Performs Complex and Critical Rigging, Hoisting, Lifting and Positioning

Sub-Tasks

- Prepares lift plan for complex and critical rigging, hoisting, lifting and positioning
- Performs calculations for complex and critical rigging, hoisting, lifting and positioning
- Selects rigging, hoisting, lifting and positioning equipment for complex and critical lifts
- Sets up rigging, hoisting, lifting and positioning equipment for complex and critical lifts
- Performs complex and critical lifts and positioning

## MWA D: Installs, Tests, Maintains, Troubleshoots and Repairs Low and High Pressure Steams and Condensate Systems

### Task 10: Installs, Tests, Maintains, Troubleshoots and Repairs Low Pressure Steam and Condensate Systems

Sub-Tasks

- Installs equipment for low pressure steam and condensate systems
- Installs piping for low pressure steam and condensate systems
- Tests low pressure steam and condensate systems
- Maintains, troubleshoots and repairs low pressure steam and condensate systems

### Task 11: Installs, Tests, Maintains, Troubleshoots and Repairs High Pressure Steam and Condensate Systems

Sub-Tasks

- Installs equipment for high pressure steam and condensate systems
- Installs piping for high pressure steam and condensate systems
- Tests high pressure steam and condensate systems
- Maintains, troubleshoots and repairs high pressure steam and condensate systems

## MWA E: Installs, Tests, Maintains, Troubleshoots and Repairs Heating, Cooling and Process Piping Systems

### Task 12: Installs, Tests, Maintains, Troubleshoots and Repairs Hydronic Systems

#### Sub-Tasks

- Installs equipment for hydronic systems
- Installs piping for hydronic systems
- Tests hydronic systems
- Maintains, troubleshoots and repairs hydronic systems

### Task 13: Installs, Tests, Maintains, Troubleshoots and Repairs Process Piping Systems

#### Sub-Tasks

- Installs equipment for process piping systems
- Installs piping for process piping systems
- Tests process piping systems
- Maintains, troubleshoots and repairs process piping systems

### Task 14: Installs, Tests, Maintains, Troubleshoots and Repairs Industrial Water and Waste Treatment Systems

#### Sub-Tasks

- Installs equipment for industrial water and waste treatment systems
- Installs piping for industrial water and waste treatment systems
- Tests industrial water and waste treatment systems
- Maintains, troubleshoots and repairs industrial water and waste treatment systems

### Task 15: Installs, Tests, Maintains, Troubleshoots and Repairs Hydraulic Systems

#### Sub-Tasks

- Installs equipment for hydraulic systems
- Installs piping, tubing and hoses for hydraulic systems
- Tests hydraulic systems
- Maintains, troubleshoots and repairs hydraulic systems

### Task 16: Installs, Tests, Maintains, Troubleshoots and Repairs Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) Systems

#### Sub-Tasks

- Installs equipment for HVACR systems
- Installs piping for HVACR systems
- Tests HVACR systems
- Maintains, troubleshoots and repairs HVACR systems

**MWA E: Installs, Tests, Maintains, Troubleshoots and Repairs Heating, Cooling and Process Piping Systems (Cont'd)**

**Task 17: Installs, Tests, Maintains, Troubleshoots and Repairs Fuel Systems**

- Sub-Tasks**
- Installs equipment for fuel systems
  - Installs piping for fuel systems
  - Tests fuel systems
  - Maintains, troubleshoots and repairs fuel systems

**Task 18: Installs, Tests, Maintains, Troubleshoots and Repairs Medical Gas Systems**

- Sub-Tasks**
- Installs equipment for medical gas systems
  - Installs piping and tubing for medical gas systems
  - Tests medical gas systems
  - Maintains, troubleshoots and repairs medical gas systems

**Task 19: Installs, Tests, Maintains, Troubleshoots and Repairs Compressed Air and Pneumatic Systems**

- Sub-Tasks**
- Installs equipment for compressed air and pneumatic systems
  - Installs piping and tubing for compressed air and pneumatic systems
  - Tests compressed air and pneumatic systems
  - Maintains, troubleshoots and repairs compressed air and pneumatic systems

**Task 20: Installs and Tests Fire Protection Systems (NCC)**

- Sub-Tasks**
- Installs equipment for fire protection systems (NCC)
  - Installs piping for fire protection systems (NCC)
  - Tests fire protection systems (NCC)



## MWA F: Installs, Tests, Maintains, Troubleshoots and Repairs Renewable Energy Systems

### Task 21: Installs, Tests, Maintains, Troubleshoots and Repairs Geo-Exchange and Geo-thermal Systems

#### Sub-Tasks

- Installs equipment for geo-exchange and geo-thermal systems
- Installs piping for geo-exchange and geo-thermal systems
- Tests geo-exchange and geo-thermal systems
- Maintains, troubleshoots and repairs geo-exchange and geo-thermal systems

### Task 22: Installs, Tests, Maintains, Troubleshoots and Repairs Solar Heating Systems

#### Sub-Tasks

- Installs equipment for solar heating systems
- Installs piping for solar heating systems
- Tests solar heating systems
- Maintains, troubleshoots and repairs solar heating systems

### Task 23: Installs, Tests, Maintains, Troubleshoots and Repairs Heat Recovery Systems

#### Sub-Tasks

- Installs equipment for heat recovery systems
- Installs piping for heat recovery systems
- Tests heat recovery systems
- Maintains, troubleshoots and repairs heat recovery systems

## MWA G: Performs Commissioning, Start-up and Turnover

### Task 24: Prepares system for Commissioning, Start-up and Turnover

#### Sub-Tasks

- Flushes system
- Chemically treats system
- Pre-checks system for commissioning
- Selects and connects commissioning equipment

### Task 25: Commissions Systems

#### Sub-Tasks

- Secures commissioning area
- Pressurizes system
- Inspects system
- Corrects faulty conditions
- Participates in start-up and turnover procedures

## Create a Study Plan

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As you prepare for your exam, it is important to plan a schedule. The following two tables will help you stay on track.

The first table is a **“Weekly Study Plan.”** In this table list the areas you will focus your study for each day. You should include items you need to review as well as items you need to study. Remember, more time will be needed for study in areas you find difficult, whereas you may only require review in areas you are more familiar with. As you work through the RSOS sub-task list you can start to fill in this table.

The second table is a **“Study Time Table.”** It is important to create a study schedule where you determine the best days of the week and times of day for you to study.

Print several copies of these tables and fill out for each week of study. It is important to stick to your study schedule.

**Weekly Study Plan for Week of:** \_\_\_\_\_

	Area of Study 1	Area of Study 2	Area of Study 3	Area of Study 4	Area of Study 5	Area of Study 6
Mon.						
Tues.						
Wed.						
Thu.						
Fri.						
Sat.						
Sun.						

**Study Time Table for Week of:** \_\_\_\_\_

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00 AM - 9:00 AM							
9:00 AM - 10:00 AM							
10:00 AM - 11:00 AM							
11:00 AM - 12:00 Noon							
12:00 Noon - 1:00 PM							
1:00 PM - 2:00 PM							
2:00 PM - 3:00 PM							
3:00 PM - 4:00 PM							
4:00 PM - 5:00 PM							
5:00 PM - 6:00 PM							
6:00 PM - 7:00 PM							
7:00 PM - 8:00 PM							

## Resources - Websites

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Study information can be drawn from a variety of sources. A sample list of study materials (websites and books) is provided below. These and other helpful resources may be found in a local college bookstore, on the internet, or at your place of employment. You may also be able to borrow them from an apprentice or journey person in your trade.

### Study Strategies and Exam Preparation Guide

The *Study Strategies & Exam Preparation Guide* is meant to be used in conjunction with this study guide. It provides direction and information on such areas as study habits, test preparation and test taking techniques.

<https://www.gov.nl.ca/atcd/apprentices-youth/self-study/study-guides/>

### Plan of Training (POT)

A *Provincial Plan of Training* details the full scope of learning for a particular occupation, including both technical training competencies and industry experiences necessary to write an IP Red Seal exam (and complete the requirements for Red Seal Certification), or to write a provincial examination. The Plan of Training is based on the NOA.

<https://www.gov.nl.ca/atcd/designated-trades/pots-aacs/>

### Red Seal Website

**Red Seal** is a program that sets common standards to evaluate the skills of tradespeople across Canada. It is a partnership between the Federal Government and the provinces/territories.

The Red Seal model has been based on the National Occupational Analyses (NOA) which supports the development of multiple-choice examinations. A new Red Seal Occupational Standard (RSOS) was introduced in 2015 and is taking the place of the NOA.

<http://www.red-seal.ca/>

### Steamfitter/Pipefitter PRACTICE Exams

These are **NOT** IP exams. They are practice exams provided by the provinces of Alberta, British Columbia and the Inter-provincial Standards Red Seal program. They were developed using similar question types to that of a Red Seal exam. The exams are intended to be used for self-assessment in preparation for writing an IP Exam.

<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=230>

### Red Seal Exam Self-Assessment Guide

Use this self-assessment tool to rate your own understanding and experience with the tasks of the trade that are on the Red Seal examination:

[https://www.red-seal.ca/\\_conf/assets/custom/docms/steamfit-pipefit/self-assessment.pdf](https://www.red-seal.ca/_conf/assets/custom/docms/steamfit-pipefit/self-assessment.pdf)

### Glossary of Terms

The Red Seal website lists a Glossary of Terms which will be helpful in preparing for your IP exam:

[http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s\\_.1ppc\\_gl.4ss.1ry-eng.html](http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s_.1ppc_gl.4ss.1ry-eng.html)

### Acronyms

The Red Seal website lists Acronyms which will be helpful in preparing for your IP exam:

[http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s\\_.1pp.1\\_.1cr.4nym-eng.html](http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s_.1pp.1_.1cr.4nym-eng.html)

### List of Tools and Equipment

The Red Seal website shows a list of Tools and Equipment which will be helpful in preparing for your IP exam:

[http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s\\_.1ppb\\_t.4.4ls-eng.html](http://www.red-seal.ca/trades/steamfitpipefit/2015rs.4s_.1ppb_t.4.4ls-eng.html)



## Resources – Book List

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For the **Steamfitter/Pipefitter** trade, colleges use a small number of IPT books which are listed below. It is not necessary to use these books specifically, as you may find others that will be equally beneficial.

### ***IPT Books***

***IPT's Pipe Trades Handbook***, IPT Publishing and Training Ltd. (contains some information for all NOA blocks), ISBN# 978-0-920855-18-8.

***IPT's Crane and Rigging Manual***, IPT Publishing and Training Ltd. (NOA block D), ISBN# 978-0920855164.



## Disclaimer

Various external resources (websites, textbooks) have been listed in this study guide to assist an individual in preparing to write an IP Red Seal Exam. This does not mean the Department of Immigration, Population Growth and Skills, Newfoundland and Labrador, endorses the material or that these are recommended as the best resources. There may be other resources of equal or greater value to an individual preparing for an IP Red Seal exam. The Department of Immigration, Population Growth and Skills has no control over the content of external textbooks and websites listed, and no responsibility is assumed for the accuracy of the material.

## Conclusion

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We hope this guide has provided you with some useful tools as you prepare for your IP Red Seal exam. If you have any questions regarding your IP Red Seal exam please contact your regional office (*see Appendix A for a list of regional offices*).

We appreciate your comments and feedback regarding the usefulness of this study guide. If you have any comments or suggestions, we welcome your feedback. The feedback form at the end of this guide can be used for this purpose.

## Appendix A: Regional Offices

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If you have any questions regarding your IP Red Seal exam, please contact one of the following regional offices:

Department of Immigration, Population Growth and Skills  
Apprenticeship and Trades Certification Division  
Toll Free: 1-877-771-3737

<https://www.gov.nl.ca/atcd/contact-us/staff-listing-and-office-locations/>

### Corner Brook

1-3 Union Street  
Aylward Building, 2<sup>nd</sup> Floor  
Corner Brook, NL A2H 5M7

Telephone: (709) 637-2366  
Facsimile: (709) 637-2519

### Grand Falls-Windsor

42 Hardy Avenue  
Grand Falls-Windsor, NL  
A2A 2J9

Telephone: (709) 292-4215  
Facsimile: (709) 292-4502

### Clarenville

45 Tilley's Road  
Clarenville, NL  
A5A 1Z4

Telephone: (709) 466-3982  
Facsimile: (709) 466-3987

### St. John's

P.O. Box 8700  
1170 Topsail Road  
Mount Pearl, NL A1B 4J6

Telephone: (709) 729-2729  
Facsimile: (709) 729-5878

### Happy Valley – Goose Bay

163 Hamilton River Road  
Burse Building  
Happy Valley – Goose Bay, NL  
A0P 1E0

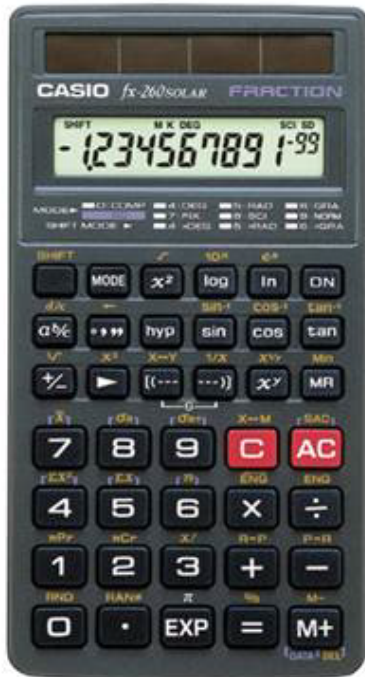
Telephone: (709) 896-6348  
Facsimile: (709) 896-3733

## Appendix B: Calculator Use

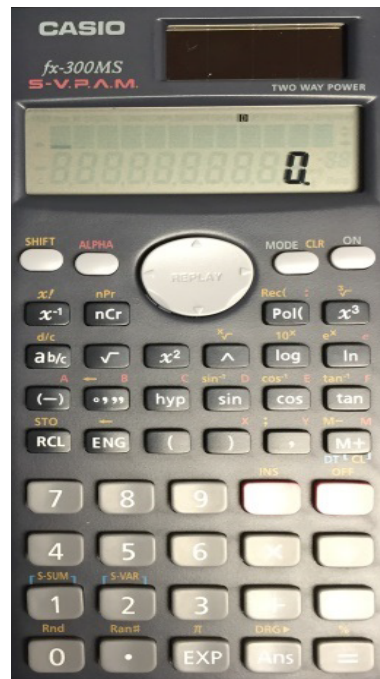
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The picture below shows a calculator with the same functions as the one you will be provided with during your exam. It is advisable to borrow or purchase one with similar functions so that you can familiarize yourself with it before you write your exam.

**Casio FX-260**



**Casio FX-300 MS**



# Appendix C: Answer Sheet Example

With your exam you will be given an answer sheet similar to the one below. When answering multiple choice questions be sure to fill the circle completely and fill the circle that corresponds to the question on the exam.

Dual readhead scanner  required  to score this sheet

KEY ID  
A B C D

SCORING & PRINTING OPTIONS:  
 RESCORE     MULTIPLE ANSWER SCORING  
 This sheet always uses the "Total Only" scoring option.

1 T F A B C D E    26 T F A B C D E    51 T F A B C D E    76 T F A B C D E  
 2 A B C D E    27 A B C D E    52 A B C D E    77 A B C D E  
 3 A B C D E    28 A B C D E    53 A B C D E    78 A B C D E  
 4 A B C D E    29 A B C D E    54 A B C D E    79 A B C D E  
 5 A B C D E    30 A B C D E    55 A B C D E    80 A B C D E  
 6 A B C D E    31 A B C D E    56 A B C D E    81 A B C D E  
 7 A B C D E    32 A B C D E    57 A B C D E    82 A B C D E  
 8 A B C D E    33 A B C D E    58 A B C D E    83 A B C D E  
 9 A B C D E    34 A B C D E    59 A B C D E    84 A B C D E  
 10 A B C D E    35 A B C D E    60 A B C D E    85 A B C D E  
 11 A B C D E    36 A B C D E    61 A B C D E    86 A B C D E  
 12 A B C D E    37 A B C D E    62 A B C D E    87 A B C D E  
 13 A B C D E    38 A B C D E    63 A B C D E    88 A B C D E  
 14 A B C D E    39 A B C D E    64 A B C D E    89 A B C D E  
 15 A B C D E    40 A B C D E    65 A B C D E    90 A B C D E  
 16 A B C D E    41 A B C D E    66 A B C D E    91 A B C D E  
 17 A B C D E    42 A B C D E    67 A B C D E    92 A B C D E  
 18 A B C D E    43 A B C D E    68 A B C D E    93 A B C D E  
 19 A B C D E    44 A B C D E    69 A B C D E    94 A B C D E  
 20 A B C D E    45 A B C D E    70 A B C D E    95 A B C D E  
 21 A B C D E    46 A B C D E    71 A B C D E    96 A B C D E  
 22 A B C D E    47 A B C D E    72 A B C D E    97 A B C D E  
 23 A B C D E    48 A B C D E    73 A B C D E    98 A B C D E  
 24 A B C D E    49 A B C D E    74 A B C D E    99 A B C D E  
 25 A B C D E    50 A B C D E    75 A B C D E    100 A B C D E

ANSWER KEY INFO.  
# OF KEYS  
ITEM COUNT

0	0	0	2
1	1	1	3
2	2	2	4
3	3	3	
4	4	4	
5	5	5	
6	6	6	
7	7	7	
8	8	8	
9	9	9	

PERFORMANCE ASSESSMENT  
% OF TOTAL SCORE (00 = 100%)    POINTS EARNED

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Bar Code

NUMBER CORRECT	
PERCENT CORRECT	
ROSTER NUMBER	
SCORE	
RESCORE	

COMBINED POINTS EARNED	
COMBINED PERCENT CORRECT	
LETTER GRADE	
SCORE	
RESCORE	

200 ITEM

MARKING INSTRUCTIONS  
Use a No. 2 Pencil  
Fill oval completely  
Erase cleanly

STUDENT ID NUMBER

0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

NAME \_\_\_\_\_  
SUBJECT \_\_\_\_\_  
PERIOD \_\_\_\_\_ DATE \_\_\_\_\_

## Feedback Form

### Study Guide – Steamfitter/Pipefitter

Please answer the following:

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- (1) This Study Guide is a useful tool for exam preparation.  
 strongly agree     agree     disagree     strongly disagree
- (2) The topics contained in the guide are arranged in a logical order.  
 strongly agree     agree     disagree     strongly disagree
- (3) The design and format of the guide caught my attention.  
 strongly agree     agree     disagree     strongly disagree
- (4) The instructions throughout the guide are clear and to the point.  
 strongly agree     agree     disagree     strongly disagree
- (5) The resources listed in this guide are suitable and valuable.  
 strongly agree     agree     disagree     strongly disagree
- (6) The guide should contain more information.  
 strongly agree     agree     disagree     strongly disagree

Suggested information/resources to include:

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Additional Comments:

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**Please complete this form and return via fax or mail to the following:**

Department of Immigration, Population Growth and Skills  
Apprenticeship and Trades Certification Division  
Standards and Curriculum Unit  
45 Tilley's Road, Clarenville, NL A5A 1Z4  
Fax: (709) 466-3987

