

Apprenticeship and Certification Study Guide



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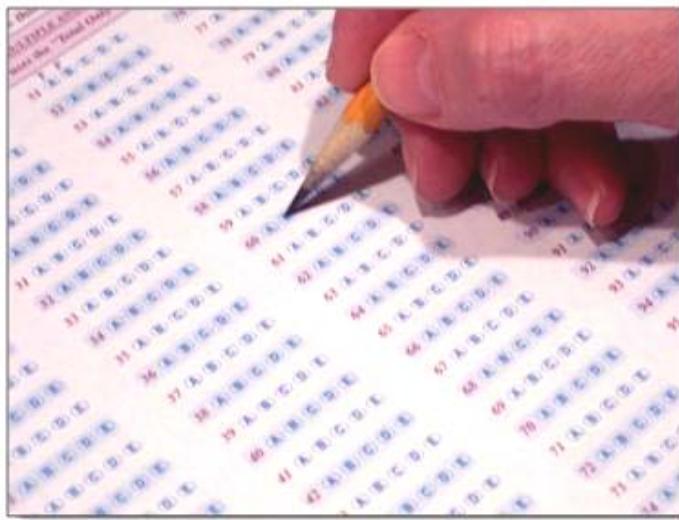
Introduction

This Study Guide has been developed by the Newfoundland and Labrador Department of Education and Early Childhood Development, Apprenticeship and Trades Certification Division, to assist apprentices and trade qualifiers as they prepare to write the Red Seal Exam. Red Seal Exams are available for all Red Seal trades. For a list of Red Seal trades please refer to the Department of Education and Early Childhood Development 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

Before the Exam

You must contact the nearest Apprenticeship and Trades Certification Divisional office to make request to write the 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

All 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 “distractors.” Distractors are incorrect. (See Appendix C for a sample answer sheet).

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.

On the following pages, examples of each of the three types of questions are provided.

Level 1 Examples:

1. What is a major advantage of the plumb laser over the plumb bob for exterior walls?
 - A. It is cheaper.
 - B. It is more accurate in windy conditions.
 - C. It is seen easily in low light conditions.
 - D. It is portable and easy to carry.



2. Why should drywall be stored in piles of no more than 50 sheets?

- A. Larger piles make it difficult to access the sheets.
- B. Larger piles cause excessive weight-loading on the floor.
- C. A pile of 50 sheets is a perfect height to use as a workbench.
- D. Standard piles make it easier to keep track of inventory.



3. What is the most important safety procedure to follow when working with lead?

- A. Wear safety glasses.
- B. Wear gloves.
- C. Wear steel-toed boots.
- D. Wash lead before application.



Level 2 Examples:

1. What is the recommended gauge for 35-mm (1 ½ in.) carrying channel in suspended ceilings?

- A. 16.
- B. 18.
- C. 20.
- D. 25.



2. What is the proper order to use when listing the dimensions of a window?

- A. Height and width.
- B. Width and height.
- C. Type and area.
- D. Type and perimeter.



3. When laying out a wall, what is the standard thickness/depth of resilient channel?

METRIC	IMPERIAL
A. 13 mm	A. 1/2 in.
B. 18 mm	B. 3/4 in.
C. 22 mm	C. 7/8 in.
D. 25 mm	D. 1 in.



Level 3 Examples:

1. A suspended 13 mm (1/2 in.) drywall ceiling will finish 2 400 mm (8 ft.) above finish floor. If a laser is set 75 mm (3 in.) below the finish ceiling line, how far above the laser line is the split line?

METRIC	IMPERIAL
A. 88 mm	A. 3 1/2 in.
B. 100 mm	B. 4 in.
C. 110 mm	C. 4 3/8 in.
D. 147 mm	D. 5 7/8 in.



2. A fire-rated partition has a single layer of 16 mm (5/8 in.) drywall on 92 mm (3 5/8 in.) steel studs at 600 mm (24 in.) on centre (o.c.). What is the spacing required for the drywall screws along the edges of the drywall?

METRIC	IMPERIAL
A. 200 mm	A. 8 in.
B. 300 mm	B. 12 in.
C. 400 mm	C. 16 in.
D. 500 mm	D. 20 in.



3. What is the recommended spacing of screws in a 13-mm (1/2 in.) drywall ceiling in which the furring bars are located 400 mm (16 in.) o.c.?

METRIC	IMPERIAL
A. 150 mm o.c.	A. 6 in. o.c.
B. 200 mm o.c.	B. 8 in. o.c.
C. 300 mm o.c.	C. 12 in. o.c.
D. 400 mm o.c.	D. 16 in. o.c.



SOURCE OF QUESTIONS:

www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=136

Exam Content

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.

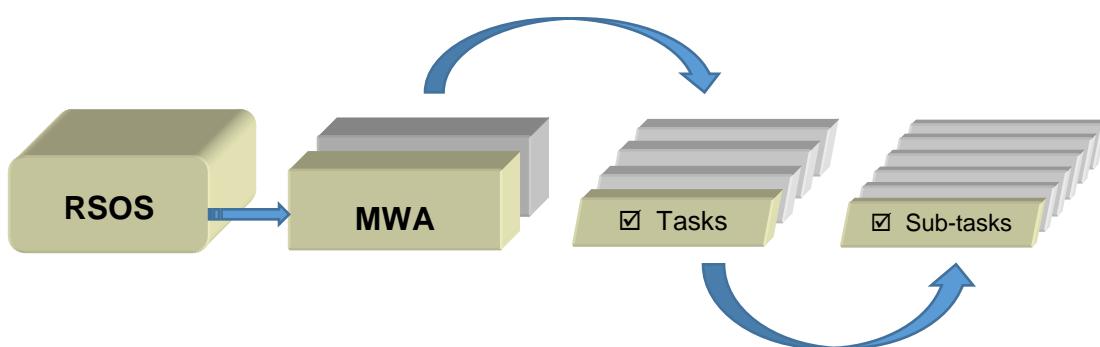
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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*).

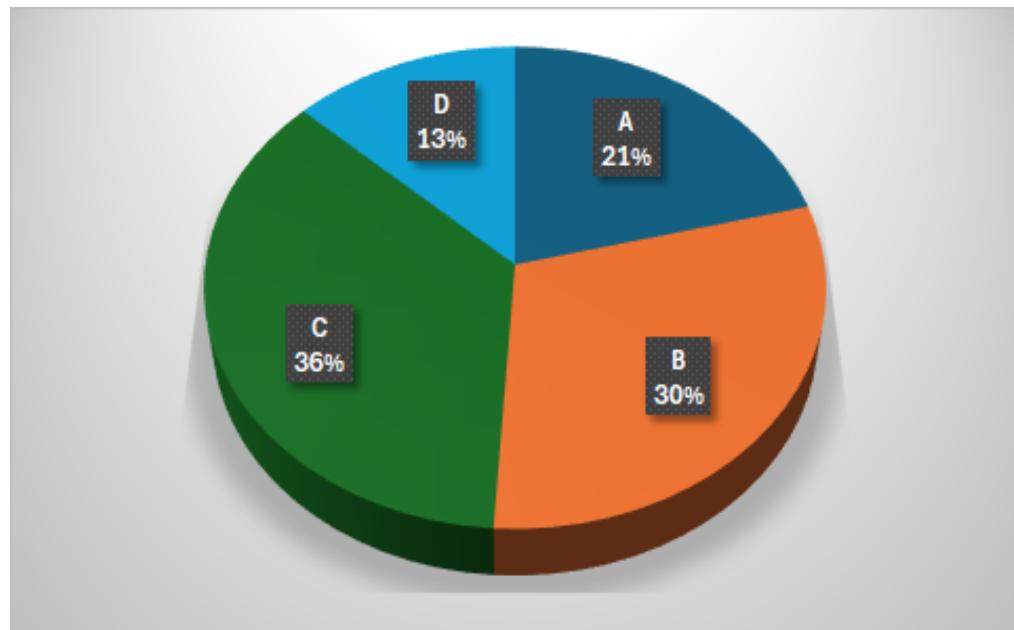


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

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, 21% of the questions on the **Lather (Interior Systems Mechanic)** Exam will be based on **MWA A**.

Lather (Interior Systems Mechanic)



MWA TITLES			
MWA A	Performs Common Occupational Skills	MWA C	Installs Interior Systems
MWA B	Performs Framing Activities	MWA D	Installs Exterior Systems

Exam Breakdown

The **Lather (Interior Systems Mechanic)** Red Seal Exam has 125 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
MWA A	Performs Common Occupational Skills	27
Task 1	Performs safety-related functions	
Task 2	Uses tools and equipment	
Task 3	Organizes work	
Task 4	Performs routine trade activities	
Task 5	Uses communication and mentoring techniques	
MWA B	Performs Framing Activities	37
Task 6	Erects non-loadbearing steel assemblies	
Task 7	Erects loadbearing steel assemblies	
MWA C	Installs Interior Systems	45
Task 8	Installs wall systems and components	
Task 9	Installs ceiling systems	
Task 10	Installs access flooring systems	
Task 11	Installs sound barriers and lead radiation shielding	
Task 12	Installs smoke and fire barriers	
MWA D	Installs Exterior Systems	16
Task 13	Installs insulation and membranes	
Task 14	Prepares surface for exterior finishes	
Task 15	Installs exterior finishes	
	Total	125

RSOS Sub-tasks

The following *RSOS Task Profile Checklist* outlines the MWAs, tasks and sub-tasks for your trade. The 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 check mark (✓) 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 MWA 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 for your trade.

Task Profile Checklist
Based on 2021 RSOS
Lather (Interior Systems Mechanic)

MWA A: Performs Common Occupational Skills

Task 1: Performs Safety-Related Functions

Sub-Tasks

- Maintains safe work environment
- Uses personal protective equipment (PPE) and safety equipment

Task 2: Uses Tools and Equipment

Sub-Tasks

- Uses hand tools
- Uses power tools and equipment
- Uses powder-actuated tools
- Uses gas-actuated tools
- Uses pneumatic tools (NOT COMMON CORE)
- Uses layout and measuring devices
- Uses scaffolding and access equipment

Task 3: Organizes Work

Sub-Tasks

- Uses documentation and reference materials
- Uses blueprints and drawings
- Plans project tasks
- Estimates materials and supplies

MWA A: Performs Common Occupational Skills (Cont'd)

Task 4: Performs Routine Trade Activities

Sub-Tasks

- Performs measurements
- Uses jigs and templates
- Handles materials, supplies and products
- Lays out work
- Applies sealants and gaskets

Task 5: Uses Communication and Mentoring Techniques

Sub-Tasks

- Uses communication techniques
- Uses mentoring techniques

MWA B: Performs Framing Activities

Task 6: Erects Non Load-Bearing Steel Assemblies

Sub-Tasks	<ul style="list-style-type: none"><input type="checkbox"/> Frames non load-bearing walls<input type="checkbox"/> Frames spanned ceilings<input type="checkbox"/> Frames suspended drywall ceilings<input type="checkbox"/> Frames non load-bearing bulkheads<input type="checkbox"/> Installs metal door and window frames<input type="checkbox"/> Installs backing
------------------	--

Task 7: Erects Load Bearing Steel Assemblies

Sub-Tasks	<ul style="list-style-type: none"><input type="checkbox"/> Frames load-bearing walls<input type="checkbox"/> Frames exterior ceilings and soffits<input type="checkbox"/> Frames load-bearing bulkheads<input type="checkbox"/> Frames load-bearing floors<input type="checkbox"/> Frames load-bearing roofs
------------------	--

MWA C: Installs Interior Systems

Task 8: Installs Wall Systems and Components

Sub-Tasks	<ul style="list-style-type: none"><input type="checkbox"/> Installs demountable walls<input type="checkbox"/> Installs drywall<input type="checkbox"/> Finishes drywall<input type="checkbox"/> Installs drywall trims and moldings<input type="checkbox"/> Installs security mesh<input type="checkbox"/> Installs access panels
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Task 9: Installs Ceiling Systems

Sub-Tasks	<ul style="list-style-type: none"><input type="checkbox"/> Installs suspended ceilings<input type="checkbox"/> Installs non-suspended ceilings
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MWA C: Installs Interior Systems (Cont'd)

Task 10: Installs Access Flooring Systems

Sub-Tasks

- Installs pedestals and supporting hardware
- Installs flooring panels

Task 11: Installs Sound Barriers and Lead Radiation Shielding

Sub-Tasks

- Installs sound barriers
- Installs lead radiation shielding

Task 12: Installs Smoke and Fire Barriers

Sub-Tasks

- Installs shaft wall systems
- Seals penetrations
- Encloses beams, columns and staircases to achieve desired fire rating

MWA D: Installs Exterior Systems

Task 13: Installs Insulation and Membranes

Sub-Tasks

- Installs thermal insulation
- Installs interior/exterior membranes

Task 14: Prepares Surface for Exterior Finishes

Sub-Tasks

- Installs exterior sheathing
- Installs lath
- Installs Exterior Insulation Finish System (EIFS) (**NOT COMMON CORE**)

Task 15: Installs Exterior Finishes

Sub-Tasks

- Fabricates panels
- Installs pre-manufactured panels

Create a Study Plan

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

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 @ _____, or at your place of employment. You may also be able to borrow them from an apprentice or _____ 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/files/Study-Strategies-and-Exam-Prep-Guide-November-2025.pdf>

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 a 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 RSOS.

<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.

Red Seal Website: <http://www.red-seal.ca/>

Lather (Interior Systems Mechanic) PRACTICE Exam

This is **NOT** a Red Seal exam. This is a practice exam provided by the Red Seal Occupational Standards Program. It was developed using similar question types to that of a Red Seal exam. The exam is intended to be used for self-assessment in preparation for writing a Red Seal Exam.

<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=136>

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/lather/self-assessment.pdf

Acronyms

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

<https://www.red-seal.ca/eng/trades/latherintsysmech/app-a.shtml>

Tools and Equipment

The Red Seal website lists Tools and Equipment which will be helpful in preparing for your Red Seal exam:

<https://www.red-seal.ca/eng/trades/latherintsysmech/app-b.shtml>

Glossary

The Red Seal website lists a Glossary which can be helpful in preparing for your Red Seal exam:

<https://www.red-seal.ca/eng/trades/latherintsysmech/app-c.shtml>

Resources – Book List

The books listed below can help you obtain information on specific topics. It is not necessary to use these books specifically, as you may find others that will be equally beneficial.

If you wish to obtain any of the resources listed, here is the reference information:

- Building Trades Blueprint Reading, Residential*, Canadian SI edition, Copp Clark Pitman, 1982, Strinholm, Ronald K., and Sundberg, Elmer, W., ISBN 978-0773029002
- Fundamentals of Building Construction: Materials and Methods*, 5th edition, Wiley, 2008, Allen, Edward, and Iano, Joseph, ISBN 978-0470074688

Disclaimer

Various external resources (websites, textbooks) have been listed in this study guide to assist an individual in preparing to write a Red Seal Exam. This does not mean the Department of Education and Early Childhood Development, Newfoundland and Labrador endorse 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 a Red Seal exam. The Department of Education and Early Childhood Development has no control over the content of external textbooks and websites listed, and no responsibility is assumed for the accuracy of the material.

Conclusion

We hope this guide has provided you with some useful tools as you prepare for your Red Seal exam. If you have any questions regarding your 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

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

Department of Education and Early Childhood Development

Apprenticeship and Trades Certification Division

Toll Free: 1-877-771-3737

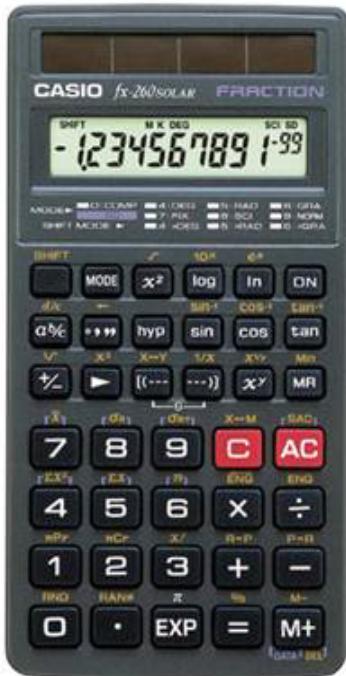
<https://www.gov.nl.ca/atcd/contact-us/staff-listing-and-office-locations/>

Corner Brook 1-3 Union Street Aylward Building, 2 nd 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 Bursey Building Happy Valley – Goose Bay, NL A0P 1E0 Telephone: (709) 896-6348 Facsimile: (709) 896-3733	

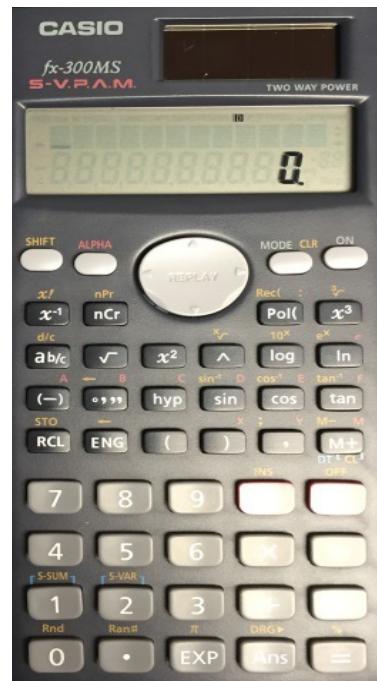
Appendix B: Calculator Use

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 like 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.

Feedback Form

Study Guide – Lather (Interior Systems Mechanic)

Please answer the following:

- (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:

Additional Comments:

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

Department of Education and Early Childhood Development

Apprenticeship and Trades Certification Division

Standards and Curriculum Unit

45 Tilley's Road, Clarenville, NL A5A 1Z4

Fax: (709) 466-3987

Department of Education and Early Childhood Development
Apprenticeship and Trades Certification Division

