

# Apprenticeship and Certification Study Guide



# Table of Contents

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Introduction .....	3
Exam Process .....	4
Before the Exam.....	4
During the Exam.....	4
After the Exam .....	4
Exam Format .....	5
Exam Content.....	9
Understanding the Red Seal Occupational Standard (RSOS).....	9
Exam Breakdown .....	11
RSOS Sub-tasks.....	12
Task Profile Checklist .....	13
Create a Study Plan .....	16
Resources - Websites.....	19
Resources – Book List.....	20
Conclusion.....	21

## Appendices

Appendix A: Acronyms .....	22
Appendix B: Tools and Equipment .....	23
Appendix C: Glossary.....	27
Appendix D: Regional Offices .....	30
Appendix E: Calculator Use .....	31
Appendix F: Answer Sheet Example .....	32

# Introduction

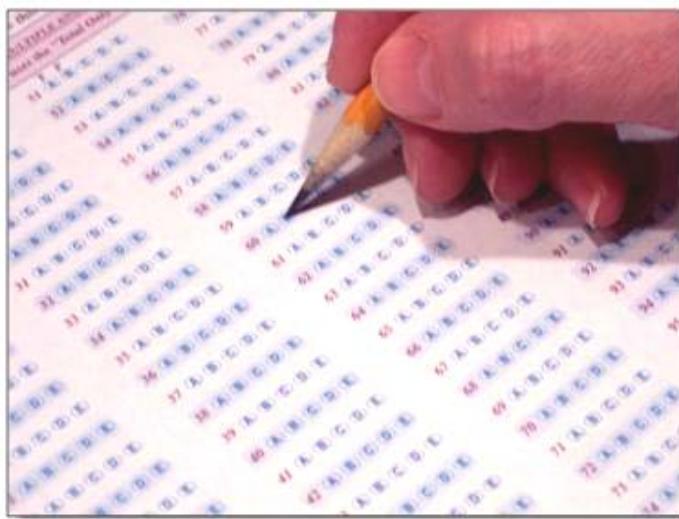
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This Study Guide has been developed by the Newfoundland and Labrador Department of Education and Early Childhood Development, Apprenticeship and Trades Certification Division, to assist apprentices and trade qualifiers as they prepare to write the 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

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

The percentage mark you obtained is 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 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. What line is used to represent a hidden object on a blueprint?
  - A. Solid.
  - B. Dotted.
  - C. Wavy.
  - D. Dashed.



2. What can be added to sub-base material in order to stabilize it?

- A. Lignosulphonates.
- B. Metal salts.
- C. Pozzolans.
- D. Proteins.



3. Which tool is used for first troweling?

- A. A push trowel.
- B. A float.
- C. A shorty trowel.
- D. A worn-in trowel.



### Level 2 Examples:

1. Polythene sheeting comes in rolls of 100 m<sup>2</sup>. Allowing for 10% overlap, how many rolls are required to cover a warehouse floor 50 m x 50 m?

- A. 25.
- B. 28.
- C. 50.
- D. 55.



2. When placing concrete using a pump, what is the result of using aluminum piping?

- A. Increased air content.
- B. Decreased concrete slump.
- C. Increased segregation.
- D. Decreased setting time.



3. If a vibrating screed is used on a concrete with a slump in excess of 100 mm, what is likely to occur?

- A. Consolidation.
- B. Carbonation.
- C. Hydration.
- D. Segregation.



### Level 3 Examples:

1. The relationship between which two materials has the greatest effect on concrete strength?

- A. Coarse and fine aggregate.
- B. Cement and air.
- C. Water and fly ash.
- D. Cement and water.



2. What occurs at the surface of the concrete if floating takes place while the bleed-water is present?

- A. Lowers surface water/cement ratio.
- B. Raise surfaces water/cement ratio.
- C. Preserves surface water/cement ratio.
- D. Raises surface aggregate/cement ratio.



3. Which structure would have a joint depth or radius of 12 mm (1/2 in.)?

- A. Sidewalk edge.
- B. Industrial concrete floor.
- C. Molded curb.
- D. Catch basin.



**Source of Questions:**  
<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=49>

## 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.

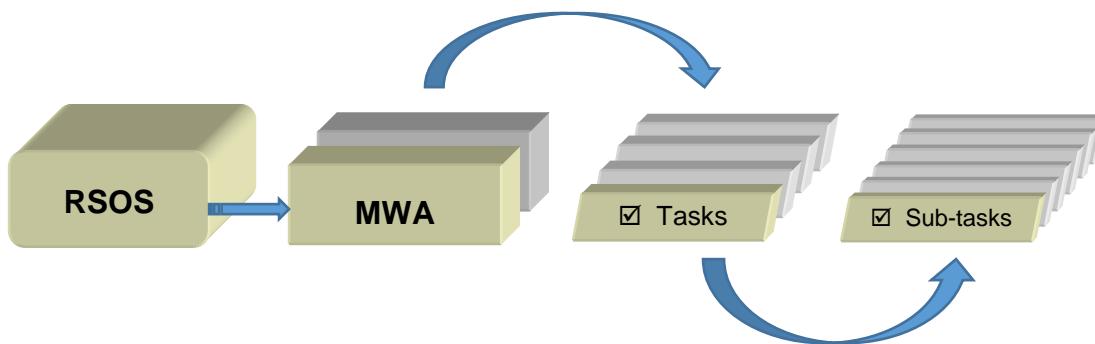
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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>

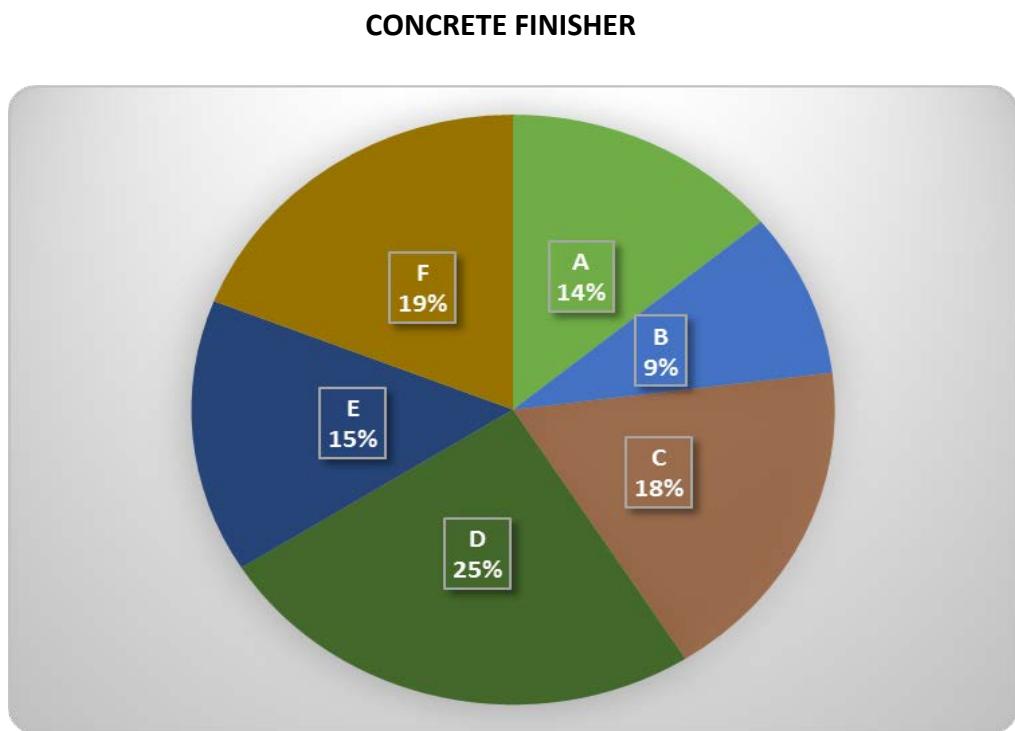
RSOS material is organized into the following categories: **MWA (Major Working Activity)**. The MWAs are further broken down into **TASKS** (*describes activities within an MWA*) and **SUB-TASKS** (*describe activities within a task – This is what the exam is based on*).



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, 14% of the questions on the **Concrete Finisher** Exam will be based on **MWA A**.



MWA TITLES			
<b>MWA A</b>	Performs Common Occupational Skills	<b>MWA D</b>	Finishes Plastic Concrete
<b>MWA B</b>	Prepares Site Preparation	<b>MWA E</b>	Cures and Protects Concrete
<b>MWA C</b>	Places and Levels Concrete	<b>MWA F</b>	Modifies and Repairs Concrete and Performs Grouting

## Exam Breakdown

The **Concrete Finisher** exam currently has 100 questions. The following table shows a breakdown of the number of questions that come from each RSOS MWA. It is important to note that the exact 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).

		<b># of Questions</b>
<b>MWA A</b>	<b>Performs Common Occupational Skills</b>	<b>14</b>
<b>Task 1</b>	Performs safety-related functions	
<b>Task 2</b>	Uses tools and equipment	
<b>Task 3</b>	Organizes work	
<b>Task 4</b>	Uses communication and mentoring techniques	
<b>MWA B</b>	<b>Performs Site Preparation</b>	<b>9</b>
<b>Task 5</b>	Prepares site	
<b>Task 6</b>	Uses formwork	
<b>MWA C</b>	<b>Places and Levels Concrete</b>	<b>18</b>
<b>Task 7</b>	Places concrete	
<b>Task 8</b>	Levels concrete	
<b>MWA D</b>	<b>Finishes Plastic Concrete</b>	<b>25</b>
<b>Task 9</b>	Floats concrete	
<b>Task 10</b>	Hand-tools concrete	
<b>Task 11</b>	Trowels concrete	
<b>Task 12</b>	Applies surface treatments to concrete	
<b>MWA E</b>	<b>Cures and Protects Concrete</b>	<b>15</b>
<b>Task 13</b>	Cures concrete	
<b>Task 14</b>	Creates contraction joints	
<b>Task 15</b>	Protects concrete	
<b>MWA F</b>	<b>Modifies and Repairs Concrete and Performs Grouting</b>	<b>19</b>
<b>Task 16</b>	Repairs and restores concrete	
<b>Task 17</b>	Applies surface treatments to hardened concrete	
<b>Task 18</b>	Grouts	
<b>Task 19</b>	Performs cutting and coring	
	<b>Total</b>	<b>100</b>

## 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 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 RSOS 2017**  
**Concrete Finisher**

**MWA A: Performs Common Occupational Skills**

<input type="checkbox"/> <b>Task 1: Performs Safety Related Functions</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Uses personal protection equipment (PPE) and safety equipment
<input type="checkbox"/> Maintains safe work environment
<input type="checkbox"/> <b>Task 2: Uses Tools and Equipment</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Uses hand tools
<input type="checkbox"/> Uses power tools
<input type="checkbox"/> Uses measuring equipment
<input type="checkbox"/> <b>Task 3: Organizes Work</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Uses documentation
<input type="checkbox"/> Determines material requirements and quantities
<input type="checkbox"/> Sequences work procedures
<input type="checkbox"/> <b>Task 4: Uses Communication and Mentoring Techniques</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Uses communication techniques
<input type="checkbox"/> Uses mentoring techniques

**MWA B: Performs Site Preparation**

<input type="checkbox"/> <b>Task 5: Prepares Site</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Inspects site
<input type="checkbox"/> Prepares sub-grade and elevations
<input type="checkbox"/> <b>Task 6: Uses Formwork</b>
<b>Sub-Tasks</b>
<input type="checkbox"/> Constructs concrete formwork
<input type="checkbox"/> Installs reinforcements
<input type="checkbox"/> Inspects formwork and reinforcement
<input type="checkbox"/> Installs construction, isolation and expansion joints
<input type="checkbox"/> Removes forms

## MWA C: Places and Levels Concrete

### Task 7: Places Concrete

**Sub-Tasks**

- Transports concrete on site
- Spreads concrete
- Consolidates concrete

### Task 8: Levels Concrete

**Sub-Tasks**

- Establishes elevation
- Screeds concrete
- Bull floats concrete

## MWA D: Finishes Plastic Concrete

### Task 9: Floats Concrete

**Sub-Tasks**

- Floats concrete by hand
- Floats concrete by machine

### Task 10: Hand-tools Concrete

**Sub-Tasks**

- Edges perimeter of slab
- Finishes extruded concrete surfaces
- Tools contraction joints

### Task 11: Trowels Concrete

**Sub-Tasks**

- Trowels concrete by hand
- Trowels concrete by machine

### Task 12: Applies Surface Treatments to Concrete

**Sub-Tasks**

- Applies dry-shake aggregate surface hardeners
- Applies exposed aggregate finish
- Textures concrete surface
- Applies stamped concrete surface finish
- Applies evaporation reducers

## MWA E: Cures and Protects Concrete

- Task 13: Cures Concrete**
  - Sub-Tasks*       Wet-cures concrete
  - Chemical cures concrete
- Task 14: Creates Contraction Joints**
  - Sub-Tasks*       Saw cuts contraction joints
  - Fills joints
- Task 15: Protects Concrete**
  - Sub-Tasks*       Protects plastic concrete
  - Protects hardened concrete

## MWA F: Modifies and Repairs Concrete and Performs Grouting

- Task 16: Repairs and Restores Concrete**
  - Sub-Tasks*       Inspects concrete
  - Removes materials
  - Prepares surface for repair or restoration
  - Installs repair materials
- Task 17: Applies Surface Treatments to Hardened Concrete**
  - Sub-Tasks*       Prepares surface for surface treatments
  - Abrades surface to achieve architectural finish
  - Applies seamless systems
  - Applies bonded and non-bonded toppings to concrete
  - Parges vertical surfaces
  - Applies chemical surface treatment
- Task 18: Grouts**
  - Sub-Tasks*       Prepares surface for grouting
  - Mixes grout
  - Installs grout
  - Finishes exposed grout surfaces
- Task 19: Performs Cutting and Coring**
  - Sub-Tasks*       Performs cutting
  - Performs coring

## 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: \_\_\_\_\_**

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

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

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

# Resources

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 journeyperson 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-October-2023.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.

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

## Concrete Finisher PRACTICE Exam

This is **NOT** an Red Seal exam. This is a practice exam provided by the Red Seal 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=49>

## 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/eng/trades/49\\_concrete\\_finisher/.2x.1m\\_cs.shtml](https://www.red-seal.ca/eng/trades/49_concrete_finisher/.2x.1m_cs.shtml)

## Acronyms

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

(See Appendix A)

## List of Tools and Equipment

The Red Seal website lists the trades Tools & Equipment which will be helpful in preparing for the Red Seal exam:

(See Appendix B)

## Glossary of Terms

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

(See Appendix C)

## Resources – Book List

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You can use this list to 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:**

- SAIT Polytechnic, 1<sup>st</sup> Year, Modules 4-28, Centre of Instructional Technology and Development, Southern Alberta Institute of Technology, Calgary, Alberta, REVISED March 2008*
- SAIT Polytechnic, 2<sup>nd</sup> Year, Modules 2-23, Centre of Instructional Technology and Development, Southern Alberta Institute of Technology, Calgary, Alberta, REVISED March 2008*

## **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**

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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 D 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

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## ACRONYMS

ACI	American Concrete Institute
CSA	Canadian Standards Association
CSP	Concrete surface profile
F <sub>F</sub>	Floor flatness
F <sub>L</sub>	Floor levelness
GFCI	Ground fault circuit interrupter
GPS	Global positioning system
ICF	Insulated concrete forming
ICRI	International Concrete Repair Institute
OH&S	Occupational Health and Safety
PPE	Personal protective equipment
SDS	Safety data sheets
SSD	Saturated surface-dry
WHMIS	Workplace Hazardous Materials Information System

# APPENDIX B

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## TOOLS AND EQUIPMENT

### HAND TOOLS

Bull float (wood, magnesium, fibreglass, channel)  
Broom  
Brush  
Bucket/pail  
Bush hammer  
Caulking gun  
Carborundum brick (hand stone)  
Centre edger  
Chalk line  
Check rod  
Chisel  
Come-along  
Cone wrench  
Cove base tool  
Crowbar  
Darby  
Edger  
Finishing broom  
Fresno trowels  
Groover  
Hammer  
Hand float (magnesium, wood, plastic, resin, sponge/rubber)  
Hand level  
Hand saw  
Hand screed  
Hand trowel  
Highway straightedge (bump cutter)  
Jitterbug/buggy roller  
Kneeboard and slider  
Lifting hook  
Margin trowel

## HAND TOOLS (Cont'd)

Pointing trowel  
Pry bar  
Rake  
Roller applicator  
Scraper  
Skate  
Sprayer  
String line  
Square shovel  
Squeegee  
Tamper  
Texturing stamp  
Tining tool  
Touch-up roller  
Water hose  
Watering can  
Wheelbarrow

## POWER TOOLS

Air compressor  
Angle grinder  
Chipping hammer and bit  
Conveyor  
Coring machine and bit  
Drill with mixing paddle  
Floor grinder  
Generator  
Hammer drill  
Hot-pour applicator  
Laser-guided screed  
Light  
Mechanical spreader  
Mortar mixer  
Power buggy

### **POWER TOOLS (Cont'd)**

Power bush hammer  
Power saw and blades (quick-cut, walk-behind and early entry saws)  
Power screed (roller, truss, vibratory)  
Power sprayer  
Power trowel and blades (finishing blades and float attachments)  
Pressure washer  
Sand/shot blaster  
Scabbler  
Scarifier/planer  
Vented heater  
Vibrator

### **MEASURING AND TESTING EQUIPMENT**

Air meter  
Builders' level  
Calculator  
Flow cone  
Inclinometer  
Laser level  
Spirit level  
Slump cone and rod  
Square  
Straightedge  
Tape measure  
Thermometer  
Total station  
Transit

### **PERSONAL PROTECTIVE EQUIPMENT (PPE) AND SAFETY EQUIPMENT**

Barrier cream  
Breathing apparatus (SCBA, air purifying equipment)  
Eye wash stations  
Face shields

## PERSONAL PROTECTIVE EQUIPMENT (PPE) AND SAFETY EQUIPMENT (Cont'd)

Fall protection  
Fire extinguisher  
First aid kit  
Gloves  
Hard hat  
Hearing protection  
High visibility vest and clothing  
Knee pad  
Personal gas monitors  
Rain suit  
Rubber boots  
Safety boots  
Safety glasses/goggles/smoggles  
Spiked footwear  
Ventilation equipment  
Wrist protection

# APPENDIX C

## GLOSSARY

ADMIXTURE	Material other than water, aggregates and cement that is used as an ingredient of concrete and is added to the mix to adjust the plastic and hardened properties of the concrete.
AGGREGATE	Granular material, such as sand, gravel, crushed stone or recycled concrete aggregates used with cement to produce concrete.
BLEED WATER	Excess water, which rises to the surface of concrete.
BULL FLOAT	A tool comprising a large, flat, rectangular piece of wood or magnesium attached with a long handle used to smooth unformed surfaces of freshly placed concrete.
BURLAP	A coarse fabric of jute, hemp, or less commonly flax, for use as a water-retaining cover for curing concrete surfaces.
CEMENT	Binder of aggregate particles.
CEMENTITIOUS MATERIAL	Substances that have cementing properties (set and harden in the presence of water).
CONCRETE	Composition of a binding medium and aggregate; commonly consists of a mixture of cement, aggregate, water and admixtures in varying proportions; mixture is worked into a plastic state and gains hardness through the hydration of water with the cement.
CONSOLIDATE	Compaction usually accomplished by vibration of newly placed concrete to minimum practical volume, to mould it within form shapes or around embedded parts and reinforcement, and to reduce void content to a practical minimum.
CONSTRUCTION JOINT	The junction of two successive placements of concrete, typically with a keyway or reinforcement across the joint.
CONTRACTION/CONTROL JOINT	A joint cut to control cracking in concrete.
CRAZING	Small cracks in a concrete surface caused by uneven contraction during hydration.
CURING	The maintenance of a satisfactory moisture content and temperature in concrete during its early stages so that desired properties might develop.

DARBY FLOAT	A hand manipulated straight edge usually 3-5 feet long used in the early stage leveling operation of concrete.
EXPANSION JOINT	An isolation joint that allows for expansion and contraction.
EXPOSED AGGREGATE	Surface texture where cement paste is washed away from concrete slab surface to expose durable aggregates for the surface.
FLOATING	Process of using a tool, usually wood or magnesium, in finishing operations to create a relatively even but still open texture to a fresh concrete surface.
FORMWORK	A temporary structure or mould for the support of concrete while it is setting and gaining sufficient strength to be self-supporting.
GRADE SHEET	A table that provides cut and fill elevations for finished grading.
GREEN CONCRETE	Concrete that has undergone final setting but not hardened appreciably
GROUT	A mixture of cementitious material or other binding material with or without water or aggregate, proportioned to produce a pourable consistency without segregation of the constituents.
HARDENER	A material applied to concrete floors to reduce wearing and dusting.
HIGH PERFORMANCE	Contains cementitious materials such as fly ash, silica fume, blast furnace slag and super plasticizer.
CONCRETE HONEYCOMB	Concrete that, due to lack of the proper consolidation, contains interconnected large voids or cavities.
ISOLATION JOINT	A joint that prevents bonding of surfaces.
OVERLAY	The addition of a new material layer onto an existing surface.
PLASTIC	A condition of freshly mixed concrete such that it is readily remoldable, workable and cohesive.
RETARDER	A product that delays the setting of concrete.

SATURATED SURFACE DRY (SSD)	Condition of an aggregate particle or other porous solid when the permeable voids are filled with water but there is no water on the exposed surface.
SAW CUT	A cut in hardened concrete utilizing diamond or silicone-carbide blades or discs.
SCALING	Surface flaking of concrete.
SCREEDING	The operation of forming a surface by the use of screed guides or a strike off.
SEGREGATION	Separation of various ingredients within a concrete mix.
SLUMP	A measure of consistency of freshly mixed concrete.
SPALLING	Pieces of concrete that have broken away.
TOPPING	A layer of concrete placed to form a floor surface on a concrete base.
WET SCREED	Placing concrete on finish grade across two known points of elevation (called wet screeds).

# APPENDIX D

## 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<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  
Bursey Building  
Happy Valley – Goose Bay, NL  
A0P 1E0

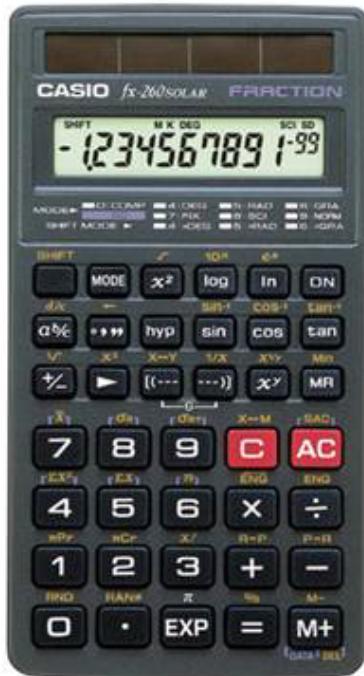
Telephone: (709) 896-6348  
Facsimile: (709) 896-3733

# APPENDIX E:

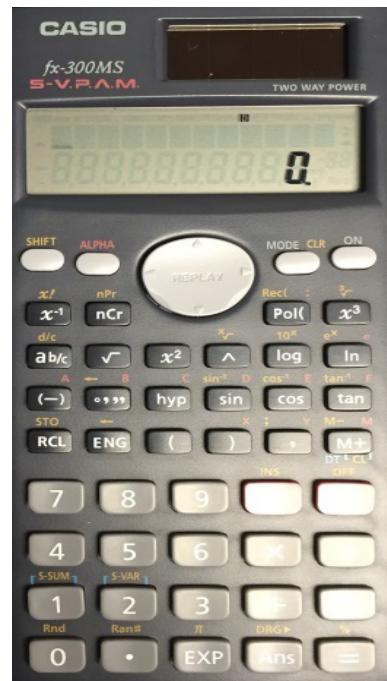
## CALCULATOR USE

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 F

## 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**

<b>KEY ID</b> <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E	<b>SCORING &amp; PRINTING OPTIONS:</b> <input type="radio"/> RESCORE <input type="radio"/> MULTIPLE ANSWER SCORING <i>This sheet always uses the "Total Only" scoring option.</i>	<b>T F</b> 1 A B C D E      26 A B C D E 2 A B C D E      27 A B C D E 3 A B C D E      28 A B C D E 4 A B C D E      29 A B C D E 5 A B C D E      30 A B C D E 6 A B C D E      31 A B C D E 7 A B C D E      32 A B C D E 8 A B C D E      33 A B C D E 9 A B C D E      34 A B C D E 10 A B C D E      35 A B C D E 11 A B C D E      36 A B C D E 12 A B C D E      37 A B C D E 13 A B C D E      38 A B C D E 14 A B C D E      39 A B C D E 15 A B C D E      40 A B C D E 16 A B C D E      41 A B C D E 17 A B C D E      42 A B C D E 18 A B C D E      43 A B C D E 19 A B C D E      44 A B C D E 20 A B C D E      45 A B C D E 21 A B C D E      46 A B C D E 22 A B C D E      47 A B C D E 23 A B C D E      48 A B C D E 24 A B C D E      49 A B C D E 25 A B C D E      50 A B C D E  <b>T F</b> 51 A B C D E      76 A B C D E 52 A B C D E      77 A B C D E 53 A B C D E      78 A B C D E 54 A B C D E      79 A B C D E 55 A B C D E      80 A B C D E 56 A B C D E      81 A B C D E 57 A B C D E      82 A B C D E 58 A B C D E      83 A B C D E 59 A B C D E      84 A B C D E 60 A B C D E      85 A B C D E 61 A B C D E      86 A B C D E 62 A B C D E      87 A B C D E 63 A B C D E      88 A B C D E 64 A B C D E      89 A B C D E 65 A B C D E      90 A B C D E 66 A B C D E      91 A B C D E 67 A B C D E      92 A B C D E 68 A B C D E      93 A B C D E 69 A B C D E      94 A B C D E 70 A B C D E      95 A B C D E 71 A B C D E      96 A B C D E 72 A B C D E      97 A B C D E 73 A B C D E      98 A B C D E 74 A B C D E      99 A B C D E 75 A B C D E      100 A B C D E																																																																																																																									
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## **Feedback Form**

### **Study Guide – Concrete Finisher**

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 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

