



# **RED SEAL EXAM**

# **SELF-ASSESSMENT GUIDE**

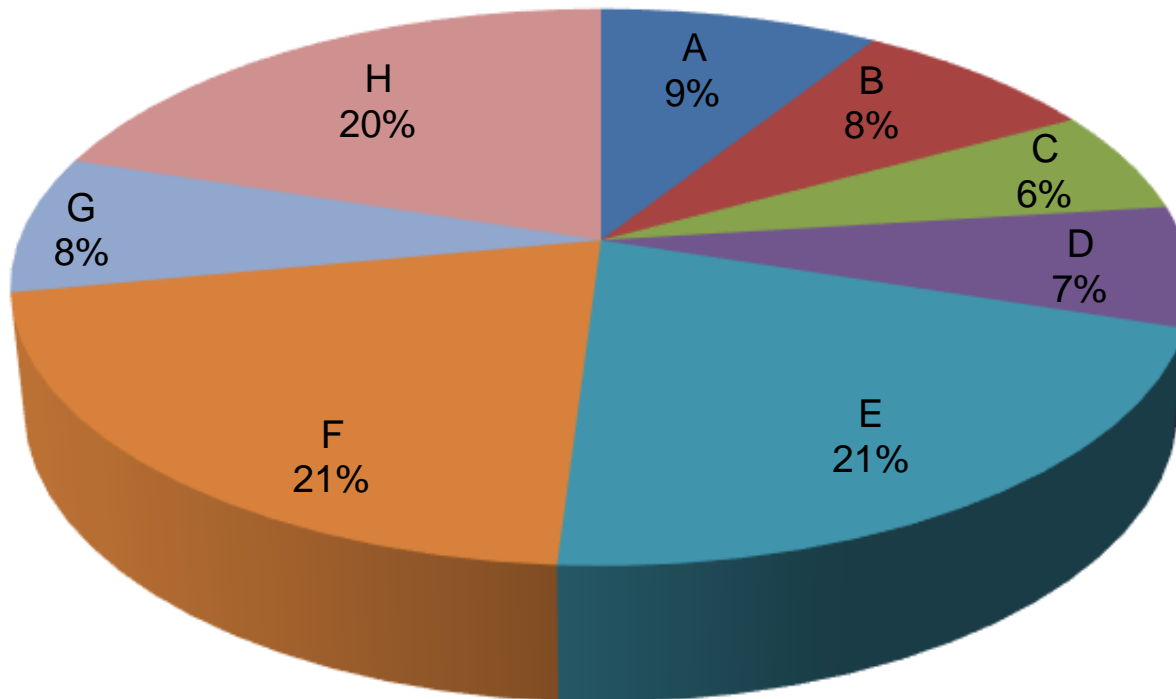
## **MACHINIST**



## Red Seal Exam Weighting

This pie chart represents the distribution of questions on the Red Seal Exam. The self-assessment on the next pages shows the Tasks and Sub-tasks within each Major Work Activity and the number of questions assigned to each Major Work Activity and Task.




The Red Seal Exam for this trade has 135 questions.



|   | <b>Major Work Activity / Exam Section</b>                | <b>Percentage of Questions</b> | <b>Number of Questions out of 135</b> |
|---|--|--------------------------------|---------------------------------------|
| A | Performs Common Occupational Skills                      | 9%                             | 13                                    |
| B | Performs Benchwork                                       | 8%                             | 11                                    |
| C | Machines Using Power Saws                                | 6%                             | 8                                     |
| D | Machines Using Drill Presses                             | 7%                             | 9                                     |
| E | Machines Using Conventional Lathes                       | 21%                            | 28                                    |
| F | Machines Using Conventional Milling Machines             | 21%                            | 28                                    |
| G | Machines Using Precision Grinding Machines               | 8%                             | 11                                    |
| H | Machines Using Computer Numerical Control (CNC) Machines | 20%                            | 27                                    |

# Breakdown of Red Seal Exam Questions and Self-Assessment

Rate your own understanding and experience with each task. Look at the activities that make up each task and consider your experience with them of them when rating yourself. Be honest!

|   |  |
|---|--|
|  <b>LOW</b>    | I have <b>no or very little understanding or experience</b> in this activity   |
|  <b>MEDIUM</b> | I <b>understand</b> this activity and have <b>some experience</b> doing it in <b>limited</b> situations                      |
|  <b>HIGH</b>   | I have a <b>very good understanding</b> of this activity and am <b>fully competent</b> in doing it in <b>many</b> situations |

This is not intended to accurately predict how you will actually do on the exam – there may be areas where you are over-confident or under-confident. But it should give you an idea of your strengths and weaknesses.













After you rate your own knowledge and experience as **LOW**, **MEDIUM** or **HIGH**, check how many questions there are and write down how many you think you will get correct.







**LOW**, you may not get many of those questions right.




**MEDIUM**, you might get some right.




**HIGH**, you expect to be able to get most of those questions right.

Comparing your scores with the number of questions on the exam will help you identify which areas you need to prepare the most. Add up your scores from each section to get an idea of your overall readiness for the exam.




|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| <b>A – Performs Common Occupational Skills</b>   |   |  |  |  |   |
| Task A-1 Performs safety-related tasks<br>1.01 Maintains safe work environment<br>1.02 Uses personal protective equipment (PPE) and safety equipment |    |   |   | 2  |   |
| Task A-2 Organizes work<br>2.01 Interprets documentation<br>2.02 Plans sequence of operations  |    |   |   | 3  |   |
| Task A-3 Uses communication and mentoring techniques<br>3.01 Uses communication techniques<br>3.02 Uses mentoring techniques                         |   |    |    | 2  |   |




|   |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of<br>questions on<br>the Red Seal<br>exam | Based on your<br>self-rating, how<br>many of the<br>questions do you<br>think you will get<br>correct? |
|---|---|--|--|---|--|
| Task A-4 Processes workpiece material<br>4.01 Selects workpiece material<br>4.02 Uses hoisting, lifting and rigging equipment<br>4.03 Marks workpiece for identification<br>4.04 Performs heat treatment<br>4.05 Performs quality control of workpiece<br>4.06 Deburrs workpiece<br>4.07 Sketches parts |    |   |   | 4   |  |







|   |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|---|---|--|--|--|---|
| Task A-5 Maintains machines, tooling and inspection equipment<br>5.01 Cleans machines<br>5.02 Lubricates machines<br>5.03 Sharpens tooling<br>5.04 Applies cutting fluid and coolant<br>5.05 Troubleshoots equipment<br>5.06 Maintains machine alignment<br>5.07 Maintains inspection equipment | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 2  | <input type="text"/>  |
| Total number of questions for this section:   |   |  |  | 13                                       | SUM OF YOUR EXPECTED CORRECT ANSWERS<br><input type="text"/>                            |







|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| <b>B – Performs Benchwork</b>  |   |  |  |  |   |
| Task B-6 Performs hand processes<br>6.01 Performs layout<br>6.02 Saws workpiece<br>6.03 Files workpiece<br>6.04 Performs hole making operations<br>6.05 Performs threading operations<br>6.06 Installs thread inserts<br>6.07 Broaches workpiece<br>6.08 Performs pressing operations<br>6.09 Forms workpiece<br>6.10 Finishes workpiece | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 8  | <div></div>   |
| Task B-7 Refurbishes components<br>7.01 Disassembles components<br>7.02 Analyzes components<br>7.03 Assembles components   | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 3  | <div></div>   |
| Total number of questions for this section:  |   |  |  | 11                                       | <div>SUM OF YOUR EXPECTED CORRECT ANSWERS</div> <div></div>                             |












|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| <b>C – Machines Using Power Saws</b>   |   |  |  |  |   |
| Task C-8 Sets up power saws<br>8.01 Selects power saw types<br>8.02 Selects saw blades<br>8.03 Installs saw blades<br>8.04 Selects power saw speeds and feeds<br>8.05 Makes power saw adjustments<br>8.06 Sets up workpiece on power saw | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 5  |   |
| Task C-9 Operates power saws<br>9.01 Saws straight and angle cuts<br>9.02 Cuts irregular shapes  | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 3  |   |
| Total number of questions for this section:  |   |  |  | 8  | SUM OF YOUR EXPECTED CORRECT ANSWERS<br><input type="text"/>                            |







|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| <b>D – Machines Using Drill Presses</b>  |   |  |  |  |   |
| Task D-10 Sets up drill presses<br>10.01 Selects drill press types<br>10.02 Plans operation of drill presses<br>10.03 Selects drill press speeds and feeds<br>10.04 Sets up jigs, fixtures and work holding devices for drill presses<br>10.05 Sets up tooling for drill presses | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 5  | <div></div>   |
| Task D-11 Operates drill presses<br>11.01 Drills holes using a drill press<br>11.02 Cuts countersinks, counterbores, chamfers and spot faces using a drill press<br>11.03 Performs tapping using a drill press<br>11.04 Finishes holes using a drill press                       | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 4  | <div></div>   |
| Total number of questions for this section:  |   |  |  | 9  | SUM OF YOUR EXPECTED CORRECT ANSWERS<br><div></div>                                     |

|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of<br>questions on<br>the Red Seal<br>exam | Based on your<br>self-rating, how<br>many of the<br>questions do you<br>think you will get<br>correct? |
|--|---|--|--|---|--|
| <b>E – Machines Using Conventional Lathes</b>  |   |  |  |   |  |
| Task E-12 Sets up conventional lathes<br>12.01 Selects conventional lathe types<br>12.02 Plans operation of conventional lathes<br>12.03 Sets up work holding devices for<br>conventional lathes<br>12.04 Sets up tooling for conventional lathes<br>12.05 Sets up conventional lathe accessories<br>12.06 Sets up workpiece on conventional lathe<br>12.07 Selects conventional lathe speeds and<br>feeds |    |   |   | 14  |  |

|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| Task E-13 Operates conventional lathes<br>13.01 Faces surfaces using a conventional lathe<br>13.02 Turns external surfaces using a conventional lathe<br>13.03 Drills using a conventional lathe<br>13.04 Bores holes using a conventional lathe<br>13.05 Reams holes using a conventional lathe<br>13.06 Turns tapers using a conventional lathe<br>13.07 Knurls using a conventional lathe<br>13.08 Cuts grooves using a conventional lathe<br>13.09 Cuts threads using a conventional lathe<br>13.10 Parts off workpiece using a conventional lathe |    |   |   | 14                                       |   |
| Total number of questions for this section:  |   |  |  | 28                                       | SUM OF YOUR EXPECTED CORRECT ANSWERS<br><div></div>                                     |










|  |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|---|--|--|--|---|
| <b>F – Machines Using Conventional Milling Machines</b>  |   |  |  |  |   |
| Task F-14 Sets up conventional milling machines<br>14.01 Selects conventional milling machine types<br>14.02 Plans operation of milling machines<br>14.03 Sets up work holding devices for conventional milling machines<br>14.04 Sets up tooling for conventional milling machines<br>14.05 Sets up milling accessories<br>14.06 Sets up workpiece on a conventional milling machine<br>14.07 Selects conventional milling machine speeds and feeds |    |   |   | 15                                       | <div></div>   |

|   |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|---|---|--|--|--|---|
| Task F-15 Operates conventional milling machines<br>15.01 Mills surfaces using a conventional milling machine<br>15.02 Mills profiles and pockets using a conventional milling machine<br>15.03 Mills slots, grooves and keyways using a conventional milling machine<br>15.04 Cuts gears and splines using a conventional milling machine<br>15.05 Drills holes using a conventional milling machine<br>15.06 Reams holes using a conventional milling machine<br>15.07 Cuts countersinks, counterbores, chamfers and spot faces using a conventional milling machine<br>15.08 Performs tapping using a conventional milling machine<br>15.09 Bores holes using a conventional milling machine | <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/>   | 13                                       | <input type="text"/>  |
| Total number of questions for this section:   |   |  |  | 28                                       | SUM OF YOUR EXPECTED CORRECT ANSWERS<br><input type="text"/>                            |

|   |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|---|---|--|--|--|---|
| <b>G – Machines Using Precision Grinding Machines</b>   |   |  |  |  |   |
| Task G-16 Sets up precision grinding machines<br>16.01 Selects precision grinding machine types<br>16.02 Plans operation of grinding machines<br>16.03 Sets up work holding devices for precision grinding machines<br>16.04 Mounts grinding wheel<br>16.05 Sets up grinding accessories<br>16.06 Sets up workpiece on precision grinding machines<br>16.07 Selects precision grinding machine speeds and feeds |    |   |   | 6  | <div></div>   |

|   | <div>● LOW</div> <div>Understanding / Experience</div> | <div>● MEDIUM</div> <div>Understanding / Experience</div> | <div>● HIGH</div> <div>Understanding / Experience</div> | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|---|--|---|---|--|---|
| Task G-17 Operates precision grinding machines<br>17.01 Grinds flat surfaces using a surface grinder<br>17.02 Grinds profiles<br>17.03 Grinds internal and external cylindrical and tapered surfaces<br>17.04 Grinds tools and cutters<br>17.05 Finishes holes using a honing machine | <input type="checkbox"/>                               | <input type="checkbox"/>                                  | <input type="checkbox"/>                                | 5  |   |
| Total number of questions for this section:   | 11   |   |   |  | SUM OF YOUR EXPECTED CORRECT ANSWERS  |



|   |  <b>LOW</b><br>Understanding<br>/ Experience |  <b>MEDIUM</b><br>Understanding<br>/ Experience |  <b>HIGH</b><br>Understanding<br>/ Experience | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|---|---|--|--|--|---|
| <b>H – Machines Using Computer Numerical Control (CNC) Machines</b>   |   |  |  |  |   |
| Task H-18 Performs CNC programming<br>18.01 Creates process documentation<br>18.02 Creates manual input program<br>18.03 Transfers program to and from control memory<br>18.04 Optimizes program<br>18.05 Creates 2D and 3D models<br>18.06 Programs using computer-aided manufacturing (CAM) |    |   |   | 12                                       |   |
| Task H-19 Sets up CNC machines<br>19.01 Selects tooling and tool holders for CNC machines<br>19.02 Sets up tooling and tool holders on CNC machines<br>19.03 Sets up workpieces on CNC machines<br>19.04 Establishes work datum<br>19.05 Verifies program                                     |    |   |   | 8  |   |

|  | <div>● LOW</div> <b>Understanding / Experience</b> | <div>● MEDIUM</div> <b>Understanding / Experience</b> | <div>● HIGH</div> <b>Understanding / Experience</b> | Number of questions on the Red Seal exam | Based on your self-rating, how many of the questions do you think you will get correct? |
|--|--|---|---|--|---|
| Task H-20 Operates CNC machines<br>20.01 Adjusts offsets<br>20.02 Monitors machining processes<br>20.03 Interrupts program cycle<br>20.04 Restarts program cycle | <input type="checkbox"/>                           | <input type="checkbox"/>                              | <input type="checkbox"/>                            | 7  | <div></div>   |
| Total number of questions for this section:  | 27   |   |   |  | <div></div>   |
|  |  |   |   |  |   |
| Now, add up the totals you gave yourself for each section.   | TOTAL NUMBER OF QUESTIONS<br>135                   |   |   |  | <div></div>   |

## **Interpreting your Self-Assessment**

What score did you give yourself?

Divide it by the number of questions to get a percentage.

The passing mark for the Red Seal exam is 70%. If you rated yourself higher than that overall, you feel pretty confident that your experience and knowledge in the trade are good enough for a pass. However, remember that this self-assessment is just a guide. We still encourage you to develop a study plan and to consider the areas where you rated yourself as less confident.

If your overall score is less than 70%, you might have more work to do. Look more closely at your scores section by section. What are the areas where you have the most to gain?

Look over the Red Seal Exam Preparation Guide for more advice.