

INSTRUMENTATION AND CONTROL TECHNICIAN Interprovincial Journeyman Examination Information

Apprentice Requirements:	4 years and 6800 hours
Tradesperson Requirements:	6 years and 10 200 hours
Practical Examination:	No

The interprovincial (IP) journeyman examination for this trade is developed by a national committee of worker and employer representatives. The content for IP Examinations is drawn from the National Occupational Analysis (NOA) for that trade, and is based on industry's standards and expectations. You can download and print a free copy of the NOA from the Red Seal website by visiting www.red-seal.ca.

To write the interprovincial journeyman examination, you must either successfully complete an apprenticeship training program or meet tradesperson eligibility requirements. The pass mark is 70%.

Subject	Percent
Occupational Skills: Performs safety-related functions; organizes work; performs routine trade activities.	6%
Process Measuring and Indicating Devices: Installs and services pressure, temperature, level and flow devices; installs and services motion, speed, position and vibration devices; installs and services mass, density and consistency devices; installs and services process analyzers; installs and services multiple variable computing devices.	27%
Safety and Security Systems and Devices: Installs and services safety systems and devices; installs and services safety instrumented systems.	7%
Hydraulic, Pneumatic and Electrical Systems: Installs and services control devices for hydraulic systems; pneumatic equipment; and electrical and electronic equipment.	9%
Final Control Devices: Installs and services valves; i actuators; and positioners; configures and services variable speed drives.	20%
Communications Systems and Devices: Installs and services control network systems; signal converters; gateways, bridges and media converters.	10%
Control Systems and Process Control: Establishes and optimizes process control strategies; stand-alone controllers (SACs) programmable logic controllers (PLCs); distributed control systems (DCSs); human machine interfaces (HMIs); and Supervisory Control and Data Acquisition (SCADA) systems.	21%
	100%

Suggested trade resources when preparing for the examination.

To assist you, a list of reference textbooks is provided below. Note that ISBN numbers are subject to change. Please consult with your supplier to access their most current version of the text you are acquiring. It is not necessary to use these specific textbooks; you may find others which will be equally beneficial. You are encouraged to seek additional reference materials in all test areas.

- Instrument Engineer's Handbook: Process Control and Optimization by Liptak pub CRC Press ISBN 9780849310812
- Instrument Engineer's Handbook: Process Measurement and Analysis by Liptak pub CRC Press ISBN 9780849310836
- Instrument Engineer's Handbook: Process Software and Digital Networks by Liptak pub CRC Press ISBN 9781439817766
- Fundamentals of Industrial Control by Albert & Coggan pub ISA ISBN 9781556178634
- Electronics Fundamentals, Circuits, Devices and Applications by T.L. Floyd pub Prentice Hall ISBN 9780135072950

Individual Learning Modules (ILMs) for the Instrumentation and Control Technician trade may be ordered through the Saskatchewan Polytechnic Bookstore Call Centre: 1-866-569-8398. They are also available through www.tradesecrets.org

(*Any fundamental electronics text book that covers basic circuits, transistors and operational amplifiers would be suitable.)

Unless otherwise noted, books listed here are available through the Saskatchewan Polytechnic Bookstore Call Centre: 1-866-569-8398.

NOTE: Textbooks **are not** usually available from libraries. When textbooks are being purchased, candidates should allow several weeks for delivery and several weeks for studying.

Red Seal Examination preparation resources:

To assist in the understanding of the development of all Interprovincial Red Seal examinations, Employment and Social Development Canada (ESDC) has developed the following information.

- A short video explaining the role of an occupational standard in the development of a Red Seal examination can be accessed on the Red Seal website at the following link: <http://www.red-seal.ca/resources/wh.1t.3sn.4.1-eng.html>
- The Getting Ready for the Examination document can be accessed through the Red Seal website at the following link: <http://www.red-seal.ca/docms/getready-eng.pdf>
- Red Seal examination sample questions can be accessed on the Red Seal Website at the following link: http://www.red-seal.ca/resources/s.1mpl.2_q.5.2st.3.4ns-eng.html

Use of cell phones, electronic imaging/recording or communication equipment is **not** permitted. You will be required to leave immediately if any of these items are found on your person.

Please note that examinations and study information change frequently. The most recent information is available on our web site at www.saskapprenticeship.ca