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Introduction

Welcome to the IHSA National Construction Safety Officer (NCSO®)/National Health and Safety Administrator (NHSA™) study guide. This study guide has been created to help you prepare to write the provincial and national exams. Please review this study guide thoroughly to ensure you are prepared to write the exams.

To write the exams, you must be registered with and approved by the IHSA NCSO® Administrator; the NCSO® Administrator will notify you of your exam date and location.

Only those applicants who have been scheduled for the exam will be allowed to write.

IHSA would like to thank the British Columbia Construction Safety Association (BCCSA) for sharing their NCSO®/NHSA™ Study Guide which is the basis for this study guide.

Purpose of the Study Guide

What is a study guide?

A study guide is a tool that helps organize the information you need to review to prepare for your NCSO®/NHSA™ exams. The guide assists with the following:

- Identification of resource materials
- Prioritizing the importance of each resource
- Review of each resource in an organized manner
- How to locate key information and ideas
- How to find and apply supporting evidence of key information (i.e. examples or definitions)
- Help you to understand how the exam is structured
- Explains what types of questions you will be asked
- What happens on exam day

This study guide will only fulfill its intended purpose if you are committed to spending time and effort applying the recommendations it contains. It is designed to make “how” you study more
effective. The guide will not contain enough specific information on health and safety to let you complete the exam successfully. That information can only be found in the resources materials.

Everyone has a different style of learning and study. How you understand, retain and apply information will make a difference in how you prepare for the NCSO®/NHSA™ exams. Knowing what environment (quiet space, working with a partner) supports your best learning potential is important. Once you identify how and where you learn best you can use this guide to enhance your preparation process.

**Study plan**

Make your study a priority and schedule it accordingly. Effective planning is essential when working as a safety professional; it will also help you do well on your exams!

Another aspect of study preparation is knowing where your knowledge base is strongest and weakest. When your knowledge of a subject is limited you will benefit from focusing your study on understanding key concepts, definitions and applications. It is recommended to spend twice as much time on unfamiliar topics. This does not mean you should neglect to study topics you can communicate effectively; it is always possible to improve your understanding. Effective studying is about prioritizing your time and effort for a positive outcome. An overview of the resources and how to focus your studies will be presented in the NCSO®/NHSA™ Examination Resources section.
**NCSO® Certification Overview**

**NCSO®**

IHSA’s National Construction Safety Officer (NCSO®) Certificate is to recognize those who have practical construction knowledge and experience in a range of health and safety topics. With this certification, an NCSO™ can be identified as having met a specific set of criteria with regard to health and safety in construction. This makes them stand out as a valuable health and safety resource in today’s busy construction marketplace.

**NHSA™**

The National Health and Safety Administrator (NHSA™) certificate provides formal, entry–level training to individuals who are active in the administration of their company’s health and safety program but do not currently possess a minimum of three years of construction safety–related field experience in the last ten years. The following NCSO®/NHSA™ Reference Guide provides prospective candidates with an outline of the requirements and an overview of the application process, and required maintenance program.

**THE NCSO® Overview**

The objective of the NCSO® certificate is to combine practical construction experience with a range of health and safety training. A certified NCSO® is a valuable resource for construction firms when implementing health and safety measures, recognizing, assessing, controlling, and evaluating hazards or working toward building a strong health and safety culture. They can provide support and advice specific to the construction industry.

The NCSO® certificate acknowledges that an individual has completed courses that are consistent in content with certificates offered in other provinces and territories.

An NCSO® certificate also signifies that someone is not only qualified, but they have promised to adhere to a code of ethics and to maintain a high level of professional conduct while on the job.

Upon successful achievement of the NCSO® certificate, you are required to maintain all compulsory maintenance on any courses that have an expiry date such as Working at Heights.
You are also expected to supplement your knowledge and skills by taking additional courses. Failure to maintain these requirements will result in your NCSO® status becoming inactive.

The NCSO® certificate expires after three years. Maintenance is required to renew your certificate.

This certificate will also assist people who want to challenge the exam for the Construction Safety Coordinator (CSC) credential offered by the Canadian Construction Association's Gold Seal program. For more information about the program, please contact the CCA (www.goldsealcertification.com).

NHSA Certification Overview

The National Health and Safety Administrator (NHSA™) requires the same training and submissions of records and information. Pursuit of NHSA status provides formal, entry–level training to individuals who are active in the administration of their company's health and safety program, but do not currently possess the minimum of three years’ construction field experience that is required to achieve the NCSO® certification. The role of this certificate is to assist individuals who want to pursue the NCSO™ certificate in the future.

**Purpose of Examination**

The purpose of the NCSO®/NHSA™ examinations is to confirm you comprehend key health and safety concepts and can apply your knowledge in both general and specific situations related to the construction industry. There are two separate exams, a provincial and a national, each having a slightly different purpose.

There are fourteen jurisdictions within Canada (one federal, ten provincial, three territorial). Each jurisdiction has its own occupational health and safety legislation. Although there are many similarities in the legislation, there are differences that reflect the uniqueness of each jurisdiction. The provincial exam ensures the NCSO®/NHSA™ is familiar with the provincial or territorial legislation where they work.

**NCSO®/NHSA™ Provincial Exam**

Due to the differences between jurisdictions, each province or territory has an exam specific to their OHS Act and regulations. This ensures the NCSO®/NHSA™ is familiar with the provincial legislation they will use to create, implement and enforce their safety program. The exam will
test your ability to locate and explain regulatory requirements related to case studies or activity specific questions.

The Provincial Exam has been written by IHSA and all questions will be based on information taught in the required courses under the NCSO®/NHSA™ certificate. While you do not need to be a subject matter expert you should be familiar with the content in these programs.

**NCSO®/NHSA™ Workplace Assessment**
All participants must complete a simulated workplace assessment as part of the provincial exam. This assessment will show the participant understands and can apply concepts, principles, and practices involved in the recognition, evaluation, control, prevention, reduction, and elimination of hazards, accidents, injuries, diseases, and disabilities to people in on–the–job situations. The workplace assessment also establishes a level of competency and demonstrates the participant’s ability to operate as an NCSO®/NHSA™.

**NCSO®/NHSA™ National Exam**
The national exam is intended to test participants’ knowledge of health and safety fundamentals. The core concepts of risk assessment, hazard assessment, controls, training and documentation are critical to successful safety cultures and programs in the workplace. They do not differ from province to province or territory. A safety professional must be intimately familiar with this information and the application of the assessments.

If you have completed the national exam in another province submit proof of successful completion to IHSA. At this time applicants are only required to write the national exam once.
Examination Structure

This section focuses on how the exams are structured including an overview of the exam topics. Exams are created with the objective of confirming transfer of knowledge between the resource and the student. The objective of the NCSO®/NHSA™ exams is to confirm your understanding of occupational health and safety related to construction.

Exam Descriptions

The IHSA provincial exam focuses on 13 topics. There are 50 multiple choice questions; each question is worth one mark. The highest possible score for the provincial exam is 50 marks.

The IHSA workplace assessment tests your ability to apply your knowledge. There are 70 multiple choice questions. The highest possible score for the workplace assessment is 70 marks.

The national exam covers ten different topics. There are 120 multiple choice questions; each question is worth one mark. The highest possible score for the provincial exam is 120 marks.

Answer all questions; marks are not deducted for wrong answers and there are no part marks.

Type of Questions

The NCSO®/NHSA™ exams use a multiple choice format.

Multiple choice exams are the most common format of testing used today. This type of question is used to determine if you are able to identify the “right” or “best” answer out of a list of choices based on your knowledge of the subject. These types of questions are typically short and are meant to focus on a single idea or step in a broad range of topics. Even though two or more of the answer options will appear plausible there will be a clear “best” answer which does not require explanation. This multiple choice format may also include the simpler format of “true or false” questions.

Multiple choice questions are a percentage game. If a question has four options in the answer list then, without any knowledge of the subject matter, you still have a 25% chance of answering correctly. With this type of question you either know the right answer or may see which options are the “distractors”. If you can remove two options out of four as incorrect or unlikely then your percentage of being correct increases to 50%.
Multiple choice questions can be difficult if you struggle with English literacy. This is usually due to the way the question is worded. The best approach to these questions is to cover the options and try to answer the question without looking. If your answer is on the list then you can choose it and move on. If your answer is not there, then reread the question. Often, when read a second time, it is discovered that key words in the question were missed.

**Overview of Topics**

**NCSO®/NHSA™ Provincial Exam**

The topics covered on the provincial exam include:

- Rights and Responsibilities
- Acts and Regulations
- Fall Protection
- Audits and Auditing
- WHMIS
- Occupational Health
- Inspections
- Investigations
- Hazard Assessment / Hierarchy of Controls
- Health and Safety Management Systems
- Joint Health and Safety Committee (JHSC)
- Defensive Driving
- Communication

The exam topics are taken from the IHSA courses required for the NCSO®/NHSA™ certificate and Ontario’s Occupational Health and Safety Act (OHSA) and Construction Regulations (O. Reg. 213/91). Many questions are based on information found in the OHSA. Ensure that you are familiar with locating information in the legislation. It is recommended to practice “speed locating” legislation related to the above topics.

Review your participant manuals, if available, and use the IHSA website (www.ihsa.ca) to find information on topics where you need additional resources.
If you review your resource materials, focus on the above mentioned topics and do the practice questions at the end of this study guide, you will be well prepared for the exam and likely achieve a successful outcome.

NCSO®/NHSA™ **Workplace Assessment**

The workplace assessment is a series of case studies. For each case study there is a photograph and a scenario. You are asked a series of ten questions for each scenario. The workplace assessment tests whether you can apply your knowledge to identify the hazard, control the hazard, and know what legislation or standards address the risk. The scenarios cover a variety of situations found in construction, so a general knowledge of construction safety practices is required.

NCSO®/NHSA™ **National Exam**

The topics covered on the national exam include:

- Health & Safety Programs
- Hazard Assessment / Risk Assessment / Hierarchy of controls
- Training and Orientations
- Inspections
- Investigations
- Audits / Auditing
- Documentation
- Emergency Preparedness / First Aid
- Adopted Standards
- WHMIS

The topics being tested on the national exam are related to the creation, implementation, functionality, enforcement, audit and revision of safety management systems. There is a focus on foundational health and safety concepts:

- How the processes / assessments function or are applied (hazards / risks / controls / inspections /investigations)
- System and program regulatory requirements ( emergency preparedness / WHMIS)
- Who is responsible for the system (owner / management / supervisor / worker)
• Due diligence (training / documentation / adopted standards)
• How to confirm the system is working (audits / auditing processes)

You should be able to explain the purpose of each topic including a description of how the information fits into a safety management system. The national exam will not test you on specific legislation. The more you understand the fundamentals of health and safety, the better you will perform on the national exam. A NCSO®/NHSA™ should be well versed in the information contained in the required courses.
Examination Preparation

Exam Day

Now that you have been accepted to write the NCSO®/NHSA™ exam what is going to happen? You need to know what to expect and how to prepare for participating.

You will receive an email from IHSA providing your exam date and time. Please arrive at the designated location, 15 minutes prior to the scheduled exam start time. Late arrivals beyond ten minutes will not be accepted and participants will need to reschedule. Make sure you have time to familiarize yourself with the facility’s parking and building accessibility. Prepare to spend up to four hours in total at the facility where you are writing your exam.

Make sure to bring your government issued picture identification (driver’s license, permanent resident card, passport, student card).

You will be provided with a pen and a copy of Ontario’s Occupational Health & Safety Act and Construction Regulations.

You will be writing the exam as part of a group. Before the exam begins, the IHSA proctor will cover housekeeping items with the group including washroom locations, emergency procedures, breaks, the IHSA harassment policy, and the exam guidelines.

The exam is an individual exercise – no talking is permitted. No reference material, guides or personal documents are allowed into the exam facility. Phones or other electronic devices must be turned off and stored with your personal belongings under the table or at the back of the room.

You will be provided with the provincial exam first. The provincial exam has two parts – the exam and a workplace assessment. The exam is 50 multiple choice questions. The workplace assessment is 70 multiple choice questions. You have two hours and 30 minutes (150 minutes) to complete the provincial exam and workplace assessment.

You will be given an exam booklet and an answer sheet. Do not write in the exam booklet. All answers are to be written on the answer sheet. Select the one most correct answer and fill in the corresponding space on the bubble sheet. After completing the exam, hand in the exam booklet and answer sheet; you will then be given the workplace assessment booklet and answer sheet. When you have completed the workplace assessment, hand in the booklet and answer sheet.
sheet. You have now completed the provincial exam. You are free to take a break until the national exam begins. We ask that you leave quietly as not to disturb the others while they are writing.

After a 15 minute break you will be provided with the national exam. The national exam is 120 multiple choice questions. You will be given an exam booklet and an answer sheet. Do not write in the exam booklet. All answers are to be written on the answer sheet. Select the one most correct answer and fill in the corresponding space on the bubble sheet. You have two hours (120 minutes) to complete the national exam. When you have completed the exam, hand in booklet and answer sheet. You are free to leave. We ask that you leave quietly as not to disturb the others while they are writing.

You must score 75% on both the provincial exam/workplace assessment and the national exam to pass.

**After the Exam**

The completed exams are submitted and marked by the department responsible for administering the NCSO®/NHSA™ IHSA will notify the applicant of the results within two weeks. Any applicant who is not successful will be notified in writing about their results and asked to re-write the exam on a subsequent occasion based on scheduling availability. Rewrites will not be allowed until 90 days after the initial exam. The fee to re-write the examination is $100 + GST.

Examination Resources

To be accepted to write the exam for NCSO®/NHSA™ certification you must have completed the required training identified in the NCSO®/NHSA™ Application and Reference Guide found on the IHSA website (reference-guide-for-ncso-nhsa.pdf (ihsa.ca)).

There are 14 required courses. Except for first aid/CPR, all courses are available through IHSA.

Course Credits or Competency Credits

If you have health and safety training from a recognized training agency or educational institution, Ontario Ministry of Labour, Immigration, Training and Skills Development Prevention Office–approved training provider, another provincial health and safety association, or from another provincial construction safety association, your training may be comparable. There is no guarantee that training from other jurisdictions or training bodies will be accepted. To apply, complete the Course Credit Competency Credit Form.

Exemption

If you have received your NCSO®/NHSA™ from another province you are not required to take any additional training. However, IHSA strongly suggests you take those courses that pertain specifically to Ontario legislation to better your chances to pass the provincial exam.

Provincial Exam and Workplace Assessment – General Resources

The provincial exam and workplace assessment is specific to Ontario and our legislation as it relates to health and safety. The provincial exam has been created by IHSA and all questions are based on information taught in the required courses under the NCSO®/NHSA™ certificate. The information in these courses is the foundation for construction safety officer training. Being familiar with the content of these programs will help participants prepare for the provincial exam and the hazard assessment. The test questions for the provincial exam come from the post–test of these courses.

Course Review

The following courses must be completed for the NCSO®/NHSA™ designation:

- Basic Auditing Principles
- Basics of Supervising
• COR® Essentials
• COR® Internal Auditor
• Defensive Driving – G Class Driver
• First Aid/CPR (not offered at IHSA)
• Health & Safety Policies, Practices and Procedures Webinar
• Introduction to Hazard and Risk Management
• Investigating & Reporting Incidents
• Joint Health and Safety Committee Certification – Part One
• Joint Health and Safety Committee Certification – Part Two (Construction)
• Preventative Maintenance Webinar
• WHMIS 2015
• Working at Heights – Fundamentals of Fall Prevention

Below is a brief description of each program:

**Basic Auditing Principles**
This program provides an introduction to the fundamentals of auditing and how to apply these principles in the Certificate of Recognition (COR®) Audit process. It focuses on common auditing principles while using material and examples specific to the COR® Audit Tool and its elements. It is designed for individuals designated as COR® Internal Auditors who will perform the COR® audit within their organization.

**Basics of Supervising**
This program trains provincially regulated workers to become effective supervisors. Participants learn how to fulfil their role as a supervisor and about their responsibilities to manage health and safety in the workplace under Ontario law. The program provides the tools to meet their health and safety responsibilities and ensure a productive workplace. Topics include: legal responsibilities, elements of supervising, and supervisor safety tasks.

**COR® Essentials**
This program provides an introduction to the four phases of the Certificate of Recognition (COR®) Audit: prepare, perform, summarize, and submit. It provides information on the program requirements such as audit team responsibilities, audit criteria, and project planning/scheduling.
and is designed to ensure that senior management and the COR® Internal Auditor have the knowledge and resources necessary to successfully implement the COR® program.

**COR® Internal Auditor**
This workshop–based program uses scenarios and case studies to practice the four phases of the COR® Audit process: prepare, perform, summarize, and submit; providing an opportunity for the participant to apply their knowledge of the COR® Audit Tool.

**Defensive Driving – G Class Driver**
This program is designed to involve participants in group discussions of common driving problems encountered by drivers each day and to present defensive driving techniques. The program includes five modules: the law, the driver, the vehicle, the environment, and driving defensively.

**Health & Safety Policies, Procedures and Practices Webinar**
Did you know that the Occupational Health and Safety Act requires every workplace with more than five employees to have a written health & safety policy and a program to implement that policy? This webinar will assist individuals in understanding the difference between policies, procedures and practices and why they are important.

**Introduction to Hazard and Risk Management**
This program provides information and tools to assist those involved in developing or enhancing their organization’s hazard and risk management system. Through structured exercises and case studies, participants are introduced to concepts, methods, and tools used to create, implement, evaluate, communicate, and maintain a successful hazard and risk management system.

**Investigating & Reporting Incidents**
Incident investigations are essential to any successful health and safety program, as they provide the greatest opportunity for improvement when used as a prevention tool. Yet all too often, investigations are not prioritized. Untrained employees are ineffective investigators and uninformed workers are often unwilling to participate in the investigation process.

**Joint Health and Safety Committee Certification – Part One**
JHSC Certification—Part One is a generic program designed for all sectors to provide a framework that allows participants to become familiar with a wide range of workplace hazards.
Participants also learn how to recognize, assess, control, and evaluate any potential hazards that they may encounter at the workplace.

**Joint Health and Safety Committee Certification – Part Two (Construction)**

JHSC Certification—Part Two (Construction) addresses specific health and safety hazards in the construction sector. Building on JHSC—Part One training, participants reinforce their ability to recognize, assess, control and evaluate hazards. They are also required to analyze workplace hazards through the use of hazard management tools and follow up this analysis by developing action plans and making formal recommendations to the employer.

**Preventative Maintenance Webinar**

Preventive maintenance is the systematic care and protection of facilities, tools, equipment, machines, and vehicles in order to keep them in a safe, usable condition that limits downtime and extends productivity. This webinar will assist individuals in understanding the requirements of preventative maintenance and why it is important.

**WHMIS 2015**

This program summarises the new requirements for classifying hazardous products, labelling hazardous products, and formatting Safety Data Sheets (formerly Material Safety Data Sheets). During the transition period (until December 1, 2018) both WHMIS 1988 and WHMIS 2015 systems may be used. Employers must educate workers on the classification system used in their workplace. In most cases, workplaces will have products using both systems, requiring workers to receive training on both the WHMIS 1988 and the WHMIS 2015. This WHMIS course educates workers on both the WHMIS 1988 system and the new WHMIS 2015 system.

**Working at Heights – Fundamentals of Fall Prevention**

This program provides workers with basic fall prevention information required to work safely in areas where they may be exposed to fall hazards. Participants receive both classroom instruction and hands-on training in properly donning a fall arrest harness.

**National Exam – General Resources**

The best resources to use to prepare for the national exam are the materials from the 14 IHSA programs listed above. Focus on the contents that can be applied across Canada. This means looking at the fundamentals of health and safety such as applying the hierarchy of controls,
types of training required, best practices for inspections and investigations, the purpose of audits, the parts of a health and safety program, and the requirements for documentation.

While you are only required to take the 14 courses to be eligible to write the exams, the more programs you take and the more familiar you are with the material the better you will do on the exam. If you have not taken any extra courses make sure you are confident with the core knowledge contained in their curriculums.

The national exam must meet the standards of every province and territory, and may require you to recognize certain terms or descriptions of fundamental safety processes and practices that differ from region to region. What Ontario calls “constructor” may be described in British Columbia as the “prime contractor”. When reviewing your resource materials and external sources be aware of differences in terminology.

There are many excellent sources of health and safety information including:

- Infrastructure Health and Safety Association (IHSA) – www.ihsa.ca
- Canadian Centre for Occupational Health and Safety (CCOHS) – www.ccohs.ca

Roles and Responsibilities

Understanding roles and responsibilities under Ontario’s Occupational Health and Safety Act is essential for effective health and safety management. On the exams there will be questions related to the responsibilities of persons at each level of a company.

**MANAGEMENT** is responsible for policies, procedures and purchases that promote health and safety. For example, management may make a decision to buy equipment and protective gear as needed. There must be authorization for regular maintenance and repairs to keep equipment in good running order. There must be a willingness to take the time necessary for proper hazard assessments, inspections, investigations, and safety audits. The employers’ responsibilities are to:

- Establish a Health and Safety (H&S) Program
- Show support and commitment (Leadership)
- Provide a safe workplace
- Maintain the H&S Program and enforce the health and safety policies
- Ensure proper training of workers
- Ensure required personal protective equipment (PPE) is available and used
- Ensure regular inspections are conducted
- Ensure investigations are conducted as required
- Ensure first aid services are available
- Review hazard assessments, inspections and investigations
- Coordinate H&S activities with the constructor, and other employers on site
- Ensure compliance with legislation
- Report accidents and injuries to the Ministry of Labour, Immigration, Training and Skills Development (MLITSD)

**THE SUPERVISOR** ensures the company’s health and safety program is implemented.

Although some job sites have safety supervisors, the key to the success of the health and safety program on the job site is the supervisor. The supervisors’ responsibilities are to:

- Promote health and safety awareness through hazard assessments
- Establish a safe work plan
- Instruct workers – “the safe way”
- Reinforce safe behaviour
- Detect troubled workers
- Correct unsafe acts and conditions
- Assess and correct hazards
- Enforce safety rules
- Ensure proper equipment/tool use and maintenance
- Investigate incidents
- Comply with legislation
- Set a good example
- Document your actions
- Cooperate with authorities
**WORKERS** are responsible for making sure they work according to applicable site rules, practices, procedures and regulatory requirements. This means working safely and reporting unsafe acts and conditions so they can be corrected. Workers must know and believe that safety is important to the company. The workers’ responsibilities are to:

- Follow safe work procedures
- Report unsafe conditions
- Report unsafe practices
- Comply with rules and requirements
- Report accidents/incidents
- Make safety suggestions
- Set a good example
**Key Terms and Definitions**

This section outlines key terms and definitions that may help you write the exam. In its very basic form, a definition “defines” something; that is to explain or identify the nature or essential qualities of. When we know the meaning, nature or quality of a safety practice, idea or process and can explain or provide an example we are able to apply the knowledge. Safety is often complicated by terminology but when we simplify a statement or idea it makes it easier to share and receive acknowledgement and support.

**Accident** – An unplanned, undesired event that results in property or equipment damage, injury, death or occupational illness

**Accident Investigation** – The determination of facts of an accident by inquiry, observation and examination

**Acute Exposure** – A single exposure or exposure over a short time

**Acute Toxic Effects (acute toxicity)** – Effects that take place after a single exposure or after a short series of exposures within 24 hours.

**American Conference of Government Industrial Hygienists (ACGIH)** – International association of occupational hygienists that develops many guidelines for the practice of occupational hygiene. One of the most important of these guidelines is Threshold Limit Values and Biological Exposure Indices. This publication serves as the basis for occupational exposure limits in many jurisdictions around the world.

**Audit** – An evaluation of a health and safety program measuring its effectiveness and efficiency against given standards. It helps enable the company to improve its health and safety program.

**Auditor** – An individual who has the qualifications and skill set to measure health and safety performance against a given standard.

**Certificate of Recognition (COR™)** – An accreditation given to an employer’s health and safety management system that has been evaluated by a certified Auditor

**Chronic Exposure** – An exposure to a low concentration of a substance over an extended period of time
Chronic Toxic Effects (chronic toxicity) – The effects that occur after chronic exposure or that occur a long time after exposure.

CLC – Canada Labour Code

Company Rules – Company directives that govern and control conduct and action at the workplace. These rules are basic written statements that dictate acceptable behavior and leave no room for discretion or argument. Also referred to as safe work rules

Company Health & Safety Policy – A current written statement(s) of Senior Management’s philosophy, principles, and goals embodying the company/employer’s commitments to workplace health and safety.

Competent – Having the necessary ability or skills.

Complex Mixture – A mixture that is a combination of many chemicals, has a commonly known generic name and is any of the following: naturally occurring, a fraction of a naturally occurring mixture that results from a separation process, a modification of a naturally occurring mixture, a modification of a fraction of a naturally occurring mixture that results from a chemical modification process.

Constructor – The contractor, employer or other person who enters into an agreement with the owner of the work site to be the prime contractor. The constructor has the overall responsibility for health and safety on the worksite.

Critical Task – A task that has the potential to produce major loss to people, equipment, process or the environment

Cumulative Toxic Effects – Effects that usually occur after long term exposure to a substance. Individual exposures occur many times and the effects accumulate. Even very small individual exposures may result in a toxic effect.

Decomposition – The breakdown of a material into two or more different materials.

Documentation, Observations and Interviews (DOI) – These are the techniques used to verify the effectiveness of a health and safety program (also referred to as verification techniques)
Due Diligence – In legal terms, this is the requirement of a company/employer to provide safe work conditions through taking reasonable steps to prevent incidents from occurring.

Employee – An individual who works for an employer or organization and is compensated for their services. This person may be full–time, part–time or retained on a contractual basis.

Engineering Controls – Measures for eliminating or reducing hazards to which workers may be exposed. Examples include: the substitution of less hazardous products, enclosure of processes to prevent the release of hazardous materials, or installation of local exhaust ventilation to remove air borne contaminants at their point(s) of generation.

Excavation – Any cut, cavity, trench or depression in the earth’s surface resulting from rock or soil removal.

Exposure Limits – The concentrations of airborne chemicals and materials that worker exposure may not exceed. Exposure limits have various names and often have different numerical values in different jurisdictions. In Ontario these are called Occupational Exposure Limits (OELs).

First Aid Measures – The main first aid actions to be taken if a worker is seriously overexposed, often described in a section of the WHMIS SDS.

Follow-Up — the term used to indicate an action (usually hazard control) that should take place based on the recommendations in accident/incident reports and hazard assessments.

Frequency – Is how often a person would be exposed to a given hazard.

Generic WHMIS Worker Education – The component of the WHMIS worker education program that includes a general introduction to WHMIS, training in the required content of WHMIS labels and SDSs, and training in the purpose and significance of that information to workers’ health and safety on the job.

GHS – Globally Harmonized System of Classification and Labelling of Chemicals

Hazard Assessment – An evaluation used to assess and document hazards, prioritize them and determine hazard controls.

Hazard Controls – These are the measures put into place to protect workers from known hazards. The typical hierarchy of control measures are elimination, substitution, engineering,
administrative and as a last line of defense, personnel protective equipment. An accumulation of all tasks involved in the worksite.

**Hazard Recognition** – Seeing or becoming aware of a hazardous situation or condition.

**Hazardous Products** – Materials, products or substances that meet the criteria for one or more of the WHMIS product classes.

**Hazardous Products Act (HPA)** – Federal legislation that specifies suppliers’ responsibilities regarding “prohibited products,” “restricted products” and “hazardous products.” WHMIS applies only to hazardous products.

**Hazardous Products Regulations** – Federal regulations written under the authority of the Hazardous Products Act. These regulations contain the details of suppliers’ WHMIS responsibilities, including classification, supplier labels and WHMIS SDSs.

**Health and Safety Activity Summaries** – These include information that can help companies measure, review and address health and safety concerns at the workplace. These summaries may include:

- Injury statistics
- Near miss reports
- Injury reports
- Safety meeting minutes
- Inspection and hazard reports

Summaries are not limited to internal information. Companies may find it beneficial to review provincial or national reports on health and safety matters.

**Health and Safety Program (also – Occupational Health and Safety Program)** — A structured program containing specific elements that is aimed at reducing incidents and costs, resulting in a safer place of employment

**Health and Safety Rules** – An internally developed set of standards regarding policies and requirements for safety and general workplace conduct.

**Hierarchy of controls** – The term hierarchy of controls refers to a sequence of options which offer a number of ways to approach the control of hazards. The control concepts are set out
from “most effective” at the top to “least effective” at the bottom. All controls, regardless of their location in the hierarchy must effectively control the hazards.

**IDLH** – Immediately Dangerous to Life and Health

**Immediate (Direct) Causes** – The harmful transfer of energy that causes the injury, illness or property damage. The energies can include acoustic, chemical, electrical, kinetic, mechanical, potential, radiant, and thermal.

**Importer** – A person or company that brings a controlled product into Canada for sale to, or use at, a work site. Importers have the same WHMIS responsibilities as suppliers.

**Incident** – An occurrence which resulted in or had the potential for causing an injury or occupational disease or damage to anything in the work or external environment (includes both Accident and Near Miss).

**Incident Investigation** – The finding of the facts about an incident by inquiry, observation and examination

**Incident Records** – Recorded information (reports and record books) detailing what incidents, injuries, occupational illnesses or damages occurred.

**Incompatible Substances** – Materials that, when combined with a specific product, cause: the production of toxic or corrosive materials, excessive heat or an explosion.

**Ingredient Disclosure List (IDL)** – A list of 1,736 chemicals, any one of which, if present as an ingredient in a controlled product at a concentration greater than the cut off concentration specified on the list, must be revealed on a SDS. The Ingredient Disclosure List is not a list of hazardous products. (There is no comprehensive list of hazardous products).

**Inspection (Safety Inspection)** – The act of examining worksites and/or equipment, and comparing conditions and activities observed against standards. Inspections identify hazards and determine if safety legislation and health and safety policies are being followed by looking for unsafe practices and conditions. The inspection should also be used to reinforce and promote safe work practices.

**Inspection Report** – A document containing the findings of an inspection. Causes and preventive measures are identified.
Indirect Causes (also known as underlying or contributing factors) – The hazards that existed immediately prior to the incident that lead up to the Immediate Causes. They can be thought of as the unsafe conditions and unsafe practices that existed due to deficiencies in the Safety Management System, i.e., the Root (Basic) Causes.

Investigation Report – A document containing the information and facts about a specific incident. The events are put into chronological order to give a complete picture of what occurred. Causes and preventive measures are identified.

Job – A segment of work, a specific work assignment or a set of actions required to complete a specific work objective.

Job Hazard Analysis (JHA) – The process of evaluating a specific task (job) to identify all hazards or potential hazards that the individuals performing the job (task) may be exposed to.

Joint Health and Safety Committee (JHSC) – A group comprised of management and worker representatives that work together to identify deficiencies in the safety management system, and then recommend solutions to correct identified deficiencies. The JHSC plays a key role in the development, implementation, and maintenance of a health and safety program.

Lagging indicators – Measure the end result of OHS processes, policies and procedures. They're a record of things that have already happened. Since they record things after the fact, they inform a reactive health and safety culture

Leading indicators – Focus on future health and safety performance with the intent of continuous improvement. They are a signal and monitor of what is being done on an ongoing basis to prevent worker illness and injury.

Lockout – A positive method for disconnecting power, or making machinery, equipment or a process inoperative. Normally, this is done with locks attached to electrical plugs, breakers or switches, control units, valves, or levers. The person placing the lock at the lockout point must be identified. A numbered tag can also be affixed to the lockout point showing the reason for the lockout, the date and the worker’s name.

Lockout Procedure – A written procedure describing step–by–step how the positive locking out of equipment, machinery or a process is to be done.
Management – Those people that have some level of authority, responsibility and accountability within the firm.

Manager – An employee of a company who is responsible for planning, or directing a department or a group of individuals and monitoring their work. Managers have the authority to change the work assignments of staff and have some control over resources and expenditures. They are responsible for ensuring the company or department is complying with the OHSR and other applicable safety legislation.

Meetings – Meetings may include but are not limited to JHSC meetings, toolbox talks, management meetings and informal safety meetings. They may or may not include an agenda but should include a record of attendance.

MSD – Musculoskeletal Disorders

Near Miss – An incident that did not result in an injury or property damage, but which under slightly different circumstances could have.

Occupational Health and Safety Management System (OHSMS) – as defined in the OHSA; a coordinated system of procedures, processes and other measures that is designed to be implemented by employer in order to promote continuous improvement in occupational health and safety.

Occupational Illness – Physical condition or medical disorder caused by exposure to workplace environmental factors such as silica, dusts, heat, cold, hazardous materials, etc.

Odour Threshold – The lowest concentration of a substance that most people can smell

Performance–based – A requirement stating desired results or outcomes.

Personal Protective Equipment (PPE) – Protective gear designed to reduce or eliminate injuries to a worker. Basic PPE includes steel toed boots, gloves, hard hats, safety clothing and safety glasses.

Physical State – An indication of whether a product is a solid, liquid or gas.

Policy – Written statement that expresses the wisdom, philosophy, experience and or belief of Preventative Action – an action to eliminate the cause of potential non–conformity or other
potential undesirable situation. There can be more than one cause for a potential nonconformity an organization’s senior management and guides actions.

**Prescriptive–based** – A requirement stating specific actions

**Qualified** – Being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof. (CLC)

**Risk** – The chance of loss based on exposure to a hazard, probability of occurrence, and the resulting consequences of exposure to the hazard.

**Restricted Products** – The products that must be labelled in a particular way if they are to be sold in Canada. They are dealt with in Part I of the Hazardous Products Act. Restricted products that are packaged in sizes appropriate for the general public, labelled as required by the Consumer Packaging and Labelling Act and offered for sale in ordinary retail outlets are considered, for the purposes of WHMIS, to be “consumer products.”

**Root (Basic) Causes** – The deficiencies in carrying out safety policies, programs, plans, processes, procedures or practices that allowed the intermediate and immediate causes to exist. Root causes are often the result of:

- Inadequate system to control hazards through activities such as safety leadership, training, planned inspections, maintenance, hazard analysis and procedures, incident investigation and analysis, emergency preparedness, and/or rules and procedures. Inadequate performance standards that are not specific enough, not clear enough and/or not high enough. Inadequate compliance with standards because standards are not communicated and/or enforced.

**Route of Entry** – The way a product enters the body. The most common routes for workplace chemicals to enter the body are inhalation, ingestion and skin absorption. Contact between a product and skin does not necessarily result in the body absorbing the material. The material could cause a chemical burn or a rash on the surface of the skin or eye and never enter the body.

**RSI** – Repetitive Strain Injury

**RTW** – Return to Work
Rule – Can be defined as: a) Prescribed for conduct or action, or b) A bylaw governing procedures or controlling conduct, instituted by the organization involved.

Safe Job Procedures – A written, specific step–by–step description of how to complete a job safely and efficiently from start to finish.

Safe Work Practices – A set of positive guidelines or “Do’s and Don’ts” on how to perform a specific task that may not always be done in a certain way

Safety Management System – The planning, leading, organizing and controlling of activities at all levels in the organization necessary to achieve safety goals.

Senior Management – Personnel in a company or a department who directly control the overall operation of the company or department, and are in a position to make decisions for the entire company or department

Severity – Is the level of harm that could reasonably be expected to be inflicted in the case of an occurrence.

Site Specific WHMIS – The portion of the WHMIS worker education program that includes hazard information applicable to the hazardous products they work with or near, and about work procedures applicable to those products.

Subcontractor – Subcontractors are not limited to trade contractors and may include delivery people, traffic controllers, service technicians, first aid, temporary labor and cleaning services.

Supervisor – A person, who instructs, directs and controls workers in the performance of their duties. This includes foremen, supervisors, and superintendents; however, the function of supervision is independent of job title or position (i.e. people who direct work are Supervisors).

Supplier – A person or company that manufactures, processes or packages a controlled product, or that sells or imports a controlled product.

Terms of Reference – A description of the objectives and structure of a meeting, committee, project, etc.

Threshold Limit Values (TLVs) – Airborne concentrations of substances. TLVs represent conditions to which it is believed that nearly all workers may be exposed day after day without suffering adverse effects. The ACGIH developed this term.
Toxicity – A substance’s ability to cause adverse health effects in persons exposed to it.

Training – A process by which someone is taught the skills that are needed for an art, profession, or job.

Transportation of Dangerous Goods Legislation (TDG) – Federal legislation that controls the conditions under which dangerous materials may be transported on public roads, in the air, by rail or by ship. Its purpose is to protect the health and safety of persons in the vicinity of transport accidents involving those materials.

Unsafe Condition – A condition in which something exists that varies from a normal, accepted safe condition and, if not corrected, could cause injury, occupational illness, and death or property damage.

Unsafe Practice – The actions of a person in a manner which varies from the accepted or legislated safe practice, and which creates a hazard with potential for injury, occupational illness, death or property damage.

Worker – An individual employed by a company, whether full-time, part-time, volunteer or on a contractual basis. Workers may include owners, management and subcontractors; for the purposes of the COR audit this term will be used to define individuals that do not have management or supervisor responsibilities.

Workplace – Any place where a worker is or is likely to be engaged in any work. This includes any vessel, vehicle or mobile equipment used by a worker in work. Also referred to as a worksite.
We would like to hear from you!

If you have any questions or feedback regarding the exam or the exam process we ask that you contact IHSA at NCSOadministrator@ihsa.ca or (905) 625–0100.

We hope you have found this general study guide useful to your exam preparation. IHSA is excited to be offering this opportunity and we strive to support and assist you on your journey to becoming a National Construction Safety Officer or National Health and Safety Administrator. Your hard work and dedication to safety makes a difference and leads to positive outcomes in the workplace every day. Good luck on your exams!
NCSO®/NHSA™ Provincial Exam Sample Questions

1. Of the following, which is the most effective measure for controlling fall hazards?
   a) Fall arrest
   b) Fall prevention
   c) Fall reduction
   d) Travel restraint

2. In Ontario’s construction sector, what is the most common non–fatal occupational disease claim?
   a) Noise induced hearing loss
   b) Asbestosis
   c) Tendonitis
   d) Dermatitis

3. When a critical injury or fatality occurs, what is the maximum timeframe for submitting a written report to the Ministry of Labour?
   a) 1 month
   b) 1 week (5 days)
   c) 48 hours
   d) 24 hours

4. Which of the following is an example of a hazard?
   a) Overexertion
   b) Working around heavy equipment
   c) Slips, trips and falls
   d) Inhaling carbon monoxide

5. In which document is “Competent Person” defined?
   a) Occupational Health & Safety Act
   b) Regulations for Construction Projects
   c) Regulations for Industrial Establishments
   d) Highway Traffic Act
6. What is the definition of distracted driving?
   a) Driving at a rate of speed that may limit the ability of an operator of a vehicle to adjust to changing circumstances on the highway
   b) Operating a vehicle while engaged in other activities that take the driver’s attention away from the road
   c) Operating a vehicle while the person’s ability to operate the motor vehicle is impaired by alcohol.
   d) Operating a vehicle while listening to the radio.

7. What are the four components of the WHMIS system?
   a) Hazard recognition, assessment, control and evaluation
   b) Hazard identification, orientation, application of workplace labels and risk reduction
   c) Hazard identification, labelling, safe handling and storage
   d) Hazard classification, education, material safety data sheets and labels

8. Which statement best defines an audit?
   a) A formal inquiry or systematic study of products and/or processes
   b) A planned objective and independent investigation of products, processes or systems
   c) A detailed inspection and analysis of processes and systems
   d) The recording of facts or occurrences, often involving measurement

9. Which of the following verification methods are used by the COR™ Internal Auditor during the COR™ audit?
   a) Review of documentation, interviewing employees and site inspection
   b) Document review, interview employees and observation
   c) Review of documentation and interviewing company employees
   d) Interviewing employees and site inspection

10. What does the term “hazard assessment” generally refer to?
    a) The process of identifying hazards and implementing controls
    b) The process of hazard identification, risk analysis and risk evaluation
    c) The methodology involved in hazard & risk management
    d) The process which includes plan–do–check–act
NCSO®/NHSA™ Sample Hazard Assessment Exercise

Your company is doing sewer reconstruction work in the area shown. You are performing an inspection and as you are driving towards the site you observe several instances of non-compliance. You refer to the site traffic protection plan and the Typical Layout as set out in OTM Book 7 to validate your observations. You approach the supervisor and are provided with the following details.

The traffic flow is limited to one direction only. The speed on the approach road is 30 km per hour. The road is narrow, rough and muddy with many pot holes and loose gravel. In conversation with workers on the project you have been told that since this road leads to an access road for a busy highway leading into the city, vehicles often exceed the speed limit.
1. What is the primary potential hazard observed?
   a) Backing equipment
   b) Dust and/or mud
   c) Vehicular traffic
   d) Noise

2. What is the primary risk associated with the potential hazard?
   a) Heat related illness
   b) Hearing loss
   c) Back ache from prolonged standing
   d) Being struck by a vehicle

3. What category best describes this hazard?
   a) Ergonomic hazard
   b) Health hazard
   c) Safety hazard
   d) Psychosocial hazard

4. Which section of the Regulations for Construction Projects addresses this risk?
   a) Section 68
   b) Section 69
   c) Section 104
   d) Section 106

5. Could this be considered a “Dangerous Circumstance”?
   a) Yes, the worker is not facing oncoming traffic
   b) No, all controls are in place
   c) Only if the vehicles are exceeding the posted speed limit
   d) Only if the worker is injured by a vehicle

6. According to the Regulations for Construction Projects, a worker is not allowed to direct traffic if the speed is greater than what normal posted speed limit?
   a) 50 kilometres per hour
   b) 60 kilometres per hour
   c) 80 kilometres per hour
   d) 90 kilometres per hour

7. What is one requirement for a worker who is required to direct traffic?
   a) They must be a competent person
   b) They must be positioned so that their exposure to traffic is minimal
   c) They require signaller training, at a minimum, on a yearly basis
   d) They may not direct traffic during night time hours (between dusk and dawn)
8. From the answers provided, which of the following is the most appropriate control for this hazard?
   a) Provide additional signage in the approach to the work zone
   b) Perform a daily review of the Traffic Protection Plan
   c) Lower the speed limit to 10 kilometres per hour
   d) Maintain the approach to the work area (fill potholes, level gravel etc)

9. What could have been done initially to prevent exposure to this hazard?
   a) Competent person ensures that training is adequate and safe practice is enforced
   b) Nothing can be done. Worker has been trained to do the job
   c) Install barriers for worker to stand behind
   d) More frequent site inspections by Joint Health & Safety Committee

10. According to the Regulations for Construction Projects, in addition to hard hat and boots, what personal protective equipment must be worn at all times by a worker directing traffic?
    a) Eye protection, glasses or goggles, with ultraviolet filter
    b) Hearing protection – earplugs or muffs
    c) Fluorescent blaze or international orange garment that covers the upper body
    d) Retro reflective stripes on the arms and legs
NCSO®/NHSA™ National Exam Sample Questions

1. What is the purpose of performing a Job Hazard Analysis (JHA)?
   a) To determine the cost of doing a specific job, activity or task
   b) To identify job related hazards and identify appropriate controls
   c) To establish the time it takes to perform an activity or task
   d) A & C

2. What does a risk assessment measure?
   a) The probability of an incident occurring and the potential severity
   b) The down–time linked to an incident and the related costs
   c) The type of incident related injury and its severity
   d) The potential for an incident to occur

3. What is the supervisor’s responsibility to a worker who has been trained on a specific task?
   a) Stay beside the worker constantly to ensure they are performing the task properly
   b) Leave the worker to perform the task without being observed
   c) Assign another worker to observe their work and report back to the supervisor
   d) Monitor the worker to ensure the task is performed safely

4. If a workplace incident occurs what is the first thing you should do?
   a) Contact your company insurance provider
   b) Ensure that no further injury/damage occurs
   c) Preserve the site evidence
   d) Inform company contact person(s)

5. What should an incident investigator be able to determine upon completion of witness interviews?
   a) What hazard controls were in place before the incident
   b) What caused the incident
   c) What could have been done to prevent the incident
   d) Incident costs, both insured and uninsured

6. What is the primary reason for conducting an Occupational Health & Safety Management System (OHSMS) audit?
   a) It may be a requirement for bidding on certain jobs
   b) To provide an internal benchmark for measuring company branches/divisions
   c) To establish a baseline from which to measure OHSMS improvements
   d) All of the above
7. Why is it important for your company’s safety program to maintain accurate records and monitor trends?
   a) You may need to provide this information during the bidding process
   b) It is a way of demonstrating due diligence
   c) You are required to keep training records and injury trends as a legal requirement
   d) Records and trends must be provided to the Health & Safety committees if requested

8. Which legislation applies to federally regulated employers?
   a) Canadian Occupational Health, Safety and Environmental Code
   b) Occupational Health & Safety Act
   c) Canada Labour Code
   d) Employment and Social Development Act

9. According to WHMIS 2015, which term is used to describe the nature of the hazards associated with a product?
   a) Product identification
   b) Precautionary statements
   c) Hazard statements
   d) Pictograms

10. Once registered with the Certificate of Recognition (COR™) Program, how often must your company perform an internal audit?
    a) It can vary. The authority over COR™ in each province makes the determination on a company to company basis
    b) One time only, all other audits are performed by external auditors
    c) Once within the 3–year cycle
    d) Once per year over the 3–year cycle
NCSO®/NHSA™ Answers for Sample Exam Questions

Compare your answers with the correct answers listed below. Identify any incorrect answers and review the related content in preparation for the exams.

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