Designing for Corrosion Control (DCC) Exam

Exam Preparation Guide

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Introduction

The Designing for Corrosion Control (DCC) exam is designed to assess whether a candidate has the requisite knowledge, skills, and abilities (KSA) that a minimally qualified person designing corrosion control systems must possess. The 50 questions are based on the KSAs a corrosion control system designer needs to be successful in the job.

Exam Name	Designing for Corrosion Control Exam
Time	1.5 Hours (90 minutes)
Number of Questions	50
Format	Live Online Remote Proctoring (Examity*)
Passing Score	Pass or Fail

**Delivered through Examity, NOT AT Pearson Testing Center*

Target Audience

Designing for Corrosion Control (DCC) benefits anyone who has a technical corrosion background but is new to designing corrosion control systems. This includes:

- Civil engineers
- Managers
- Mechanical engineers
- Design engineers
- Process engineers
- Consultants
- Contractors
- Architects

Candidates who may successfully complete the DCC course and exam are able to apply corrosion control methods into the design process, associate materials performance to service environments, and explain the processes, methodologies, and factors influencing materials selection. Additionally, they are able to recognize the effects of corrosion and design on materials, select the appropriate methods to deliver design optimization, and apply various methods of economic analysis to find direct and indirect costs.

Requirements

Requirements for Designing for Corrosion Control

Prerequisites
• None required for course
Core Course Requirements
• Basic Corrosion or Basic Corrosion eCourse (Recommended, not required)
Core Exam Requirements
• Designing for Corrosion Control (DCC) Exam
Application Requirements
• None required

Exam Body of Knowledge

NOTE: At the end of the exam, the candidate will receive a chart with strengths and weaknesses that correspond to the Domains listed below. You will have the option to email or print it.

1. CORROSION CONTROL AND THE DESIGN PROCESS (5-8%)

- 1.1 Significance of Corrosion
- 1.2 Preventive vs Corrective Control
- 1.3 Roles of Participants in Design Process
- 1.4 Design Review Check-off List
- 1.5 Innovative vs Iterative Design
- 1.6 Corrosion Control in New Situations

2. MATCHING MATERIALS PERFORMANCE TO SERVICE ENVIRONMENTS (34-38%)

- 2.1 Steps in Materials Selection
- 2.2 Corrosion-Related Environmental Characteristics
- 2.3 Selection Based Upon Corrosion Tests
- 2.4 Materials Selection Process
- 2.5 Typical Properties of Materials
- 2.6 Organic Materials
- 2.7 Inorganic Non-metallic Materials
- 2.8 Composite Materials

3. INTERACTIVE EFFECTS OF CORROSION AND DESIGN (47-51%)

- 3.1 Effects of Design Factors on Corrosion
- 3.2 Design Features for Specific Systems
- 3.3 Corrosion Control
- 3.4 Change of Environment
- 3.5 Uniform Corrosion

4. OPTIMIZATION OF DESIGN (1-5%)

- 4.1 Economics
- 4.2 Methods of Analysis
- 4.3 Economic Considerations for Specific Systems
- 4.4 Consequences of Corrosion
- 4.5 Methods for Design Optimization
- 4.6 Combination of Methods of Corrosion Control

Types of Questions

Description of Questions

This open-book exam consists of multiple-choice questions where some questions require one answer and some require more than one answer choice. Questions that require more than one answer will include the note ***SELECT ALL THAT APPLY***.

The questions are based on the knowledge and skills required in the designing for corrosion control industry.

Sample Questions

The sample questions are included to illustrate the formats and types of questions that will be on the exam. Your performance on the sample questions should not be viewed as a predictor of your performance on the actual exam.

1. Which of the following statements apply to corrosion control in regard to design? ***SELECT ALL THAT APPLY***

    A. Corrosion control can be a legal requirement.
    B. The type and amount of corrosion that will occur is usually unrelated to design.
    C. The best designs are usually based on past experience with systems of similar design.
    D. Corrosion control must be considered at all stages of the design process in order for optimum application.

2. Which of the following types of cast iron has graphite present in spherical nodules?

    A. Gray
    B. Alloy
    C. White
    D. Ductile

Answer Key:

1. **A, C, D**
   Reference: DCC Course Manual

2. **D**
   Reference: DCC Course Manual

Preparation

Required Training

NACE Designing for Corrosion Control course

Suggested Study Material

NACE Designing for Corrosion Control Manual

Reference Material Provided During Exam

The DCC Course manual is provided in electronic form during the exam.

What to Expect on Test Day

Remote Online Exam Proctoring

** Remote online proctored exams are offered for select exams.*

The NACE Institute has partnered with Examity to offer remote online proctoring for the Designing for Corrosion Control Exam. With the new Examity platform, you can take the exam from home without arranging for a proctor or traveling to a test site. Please visit this link for information you should know.

https://naceinstitute.org/certification-resources/online-exam-proctoring

Examity Demonstration with Automated Proctor

Please visit this link for a demonstration of the computer-based exam. You will have the opportunity to get familiar with how it all works.

https://vimeo.com/399635210/2eb75207b8

Computer-Based Exam Tutorial

Please visit this link for a demonstration of the computer-based exam. You will have the opportunity to practice answering a variety of questions to help you get familiar the CBT exam format. You will also receive this tutorial link when you register for the exam:

NACE Examity Tutorial Video