



## APPLICANT INSTRUCTIONS FOR EXAMINATION

A Test Supervisor will review the testing procedures during the general instructions period. Please read these instructions carefully. You are required to show a valid driver's license or passport in order to gain entrance to the examination.

### Exam Day Schedule

Please keep in mind these are *estimated* times due to the possibility of delays during the exam. We recommend travel arrangements be made after 7:00 p.m. or the following day. **NO ONE WILL BE ADMITTED AFTER THE ADMISSION PERIOD**

7:45 a.m. - 8:15 a.m.....	Admission (30 minutes)
8:15 a.m. - 8:35 a.m.....	General Instructions (20 minutes)
8:35 a.m. - 10:35 a.m.....	Examination (2 hours)
10:35 a.m. - 10:45 a.m. ....	BREAK (10 minutes)
10:45 a.m. - 11:05 a.m. ....	Exam Instructions (20 minutes)
11:05 a.m. - 1:05 p.m. ....	Examination (2 hours)
1:05 p.m. - 2:05 p.m. ....	LUNCH (1 hour) <i>*not provided on exam day</i>
2:05 p.m. - 2:15 p.m. ....	Exam Instructions (10 minutes)
2:15 p.m. - 4:15 p.m. ....	Examination (2 hours)

It is recommended you bring a battery powered NOISELESS calculator. Calculators designed for metric conversion are allowed. Feel free to use the test booklet margins for any calculations you may require. Cell phones, personal digital assistants (PDAs) and computers (laptops) are prohibited. All candidates taking an Open Book examination must each have their own set of references to use for the exam.

**Sharing of reference materials is not allowed.**

Before the start of each examination, you will be given an answer sheet and a sealed test booklet. Make certain you complete the answer sheet according to the Test Supervisor's instructions. It is extremely important you copy the AWS Form and the Test Code Book on your answer sheet exactly as it appears on the front of your selected test booklet. Failure to do so will affect the automated scoring of your answer sheet.

Each part of the exam will begin and end at the times designated by the Test Supervisor. When the Test Supervisor gives the signal to begin, you should work as quickly as possible without being careless. Do not waste time on questions which you find too difficult. It is suggested that you identify such questions in the test booklets, then go on to answer the remaining questions. If time permits, go back and try to answer the troublesome questions. It is to your advantage to answer all questions or make an educated guess.

**ALL** answers must be marked on the scantron sheet to be scored. Be careful to mark your answer in the correct space for that question. Do not mark two answers in one space. Be sure all responses are firmly recorded and all erasures are complete. Challenged questions can only be submitted during the designated exam time. There is a form on the back of the test booklet to record your challenged questions.

**Important directions for marking answers:**

- Use black lead pencil only (No. 2 1/2 or softer)
- Do NOT use ink or ball-point pens
- Make heavy black marks that fill the bar completely
- Erase cleanly any answer you wish to change
- Make no stray marks on the answer sheet

When turning in the used test booklet and answer sheet, you will be required to verify the following on each part of the exam: (1) all instructions have been understood, (2) that no unauthorized help was given or received and (3) that you have witnessed the sealing of the envelope containing your test booklet and answer sheet. After verifying these conditions, you are free to leave the exam room. In consideration of those still testing, we require you to refrain from any conversation in or near the test room.

AWS will monitor the registration activity for the program you are registered to attend. If there is a low registration count 30 days from the program's starting date, AWS has the right to cancel the event. Please keep this in mind when making your airline reservations.

You will receive your test results by U.S. mail. Be sure to notify the Certification Department of any address change. If you notify us in writing, include your full name and member number. In an effort to protect the privacy of all applicants, AWS will not provide your test score results by telephone. All fees must be paid in full and missing documentation received prior to receiving your test results.

If you have any questions regarding your account balance, please contact AWS' Accounting Department at 1-800-443-9353, extension 240.

NON-MEMBER EXAM ATTENDEES: Your AWS membership will become active after the completion of the exam.

## Certified Welding Inspector and Associate Welding Inspector (CWI and CAWI)

Examination:		Minimum number	Minimum percentage:	
		<u>of questions</u>	<u>CWI</u>	<u>CAWI</u>
<b>Part A:</b>	<b>FUNDAMENTALS</b>	150	72%	60%
<b>Part B:</b>	<b>PRACTICAL</b>	46	72%	60%
<b>Part C:</b>	<b>CODE BOOK</b>	46-60	72%	60%

Part A: FUNDAMENTALS – Closed book test; 150 questions.

Part B: PRACTICAL – Hands-on test; 46 questions; using *Book of Specifications*.

This part of the exam requires you to use the *Book of Specifications* to answer some of the questions. You will refer to it during the examination. Those registering for the seminar and exam will be provided with the *Book of Specifications* at the seminar. For those candidates registering for examination only, a *Book of Specifications* will be sent in an examination confirmation package. On the exam date, all candidates will be provided and required to use an original copy of the *Book of Specifications*. If you would like a copy of the Book of Specification, it's available at: [http://files.aws.org/certification/CWI/Book\\_of\\_Specs.pdf](http://files.aws.org/certification/CWI/Book_of_Specs.pdf). Do not answer the exam questions based on the AWS D1.1 codebook as the information found in the *Book of Specifications* may not be the same.

You will be provided with a test kit for this portion of the exam. The test kit contains some basic tools such as fillet weld gauges, butt weld gauges, micrometer and dial caliper. A laminated sheet of photographs is provided for reference on some of the questions. Weld replicas of T-joints, groove welds, bend samples and reduced tensile bar are also included for use during the examination.

Part C: CODE BOOK – Open code book test; 46-60 questions.

(Codebook index copies are **NOT** permitted. Regarding electronic copies a receipt of purchase must be provided.)

Prior to the examination, you may tab or highlight your codebook. Written notes in the margins are also allowed. Errata sheets provided by the publisher or distributor of the codebook are permitted. You are NOT allowed to write or highlight your codebook during the examination. Candidates found writing in their codebook will be immediately removed from the classroom and disqualified from the exam.

If you are registered to take the AWS D1.1 seminar and exam package, you will be provided with an original copy of the D1.1 codebook. If you are registered to take the API 1104 Code Clinic seminar, you must purchase your own copy. Codebooks and electronic copies may be purchased through WEX at 1-888-935-3464. A printed electronic copy will be allowed at the exam only if:

- 1) The test applicant shows a receipt for proof of purchase of the electronic copy and presents it to the Test Supervisor.
- 2) No additional copies can be produced for other exam applicants. No laptops will be permitted at the exam location.

Codebook changes must be made no less than two (2) weeks prior to the confirmed start date of the seminar/exam. Changes **will not** be made after this time, no exceptions. Please review your exam confirmation letter prior to exam date for the correct codebook. Should you have any questions, please feel free to contact the Certification Department, extension 273.

**CAWI applicants** – If you successfully pass the CWI examination but were unable to achieve the CWI certification due to the fact you lacked the five years work experience requirement, you will be eligible for CWI upgrade without re-examination once the qualifying work experience is met. You will be required to submit a CWI upgrade application, along with the applicable upgrade fees to AWS. The application can be obtained by contacting the AWS Certification Department or by downloading the application from the website: [www.aws.org/certification](http://www.aws.org/certification).

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## Certified Welding Educator

Examination:		Minimum number	Minimum
		<u>of questions:</u>	<u>percentage:</u>
<b>Part A:</b>	<b>FUNDAMENTALS</b>	150	60%
<b>Part B:</b>	<b>PRACTICAL</b>	46	60%

Part A: FUNDAMENTALS – See *Certified Welding Inspector and Associate Welding Inspector* instructions

Part B: PRACTICAL – See *Certified Welding Inspector and Associate Welding Inspector* instructions

## Senior Certified Welding Inspector

Examination		Minimum number	Minimum
		<u>of questions</u>	<u>percentage</u>
<b>Part A:</b>	<b>SCWI – FUNDAMENTALS</b>	138	72% of the total number of questions (200)
<b>Part B:</b>	<b>SCWI – (B2.1 / B4.0)</b>	62	

Each part of the examination is two hours long and consists of multiple choice questions. The exams will be given in an open book format and you may bring any reference materials you feel may assist you on taking the exam. You are allowed to tab or highlight your materials with written notes in the margins as an aid to finding the answers to the exam questions. You will not be allowed to write in your materials during the examination. Candidates found writing on their material will be immediately removed from the classroom and disqualified from the exam.

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### Certified Welding Supervisor

Examination:	Minimum number of questions	Minimum percentage
<b>Part A: FUNDAMENTALS</b>	150	70%
<b>Part B: PRACTICES &amp; ECONOMICS</b>	30	70%

Each part of the examination is two hours long and consists of multiple choice questions. The exam will be given in an open book format and you may bring any reference materials you feel may assist you on taking the exam. You are allowed to tab or highlight your materials with written notes in the margins as an aid to finding the answers to the exam questions. You will not be allowed to write in your materials during the examination. Candidates found writing on their material will be immediately removed from the classroom and disqualified from the exam.

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### Certified Welding Sales Representative

Examination	Minimum number of questions	Minimum percentage
<b>SINGLE PART</b>	<b>50</b>	<b>70%</b>

The examination is two hours long and consists of 100 multiple choice questions. The exam will be given in a closed book format. Certified welding sales representative candidates shall pass (with a minimum of 70% correct answers) the CWSR written examination subjects are listed in AWS B5.14, *Specification for the Qualification of Welding Sales Representatives*.

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### 9 Year Recertification Certified Welding Inspector by Part B Exam

Examination	Minimum number of questions	Minimum percentage
<b>Part B: Practical</b>	46	72%

Part B: PRACTICAL – See CWI instructions above

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### Certified Radiographic Interpreter

Examination:	Minimum number of questions:	Minimum percentage
<b>Part A: GENERAL</b>	70	70%
<b>Part B: PRACTICAL</b>	40	70%
<b>Part C: CODE SPECIFIC</b>	78	70%

**(80% OVERALL AVERAGE OF ALL EXAMS)**

For the seminar and all parts of the examination, candidates will have access to Reference Codes and Standards which contains entire or excerpted portions of AWS, ASME, API, and ASTM standards. The Reference Codes and Standards are for educational purposes only and must be returned to AWS at the conclusion of the testing process. Candidates may bring a scientific calculator which includes a square root function.

**Part A: GENERAL** – This exam consists of 70 multiple choice questions and tests an individual's knowledge of welding, metallurgy, mathematics, radiographic theory, film selection, film processing, film handling and storage, codes, specifications and other standards. Parts A and C shall be administered in a single three hour session and candidates may not use any material other than the Reference Codes and Standards.

**Part B: PRACTICAL** – This exam consists of the evaluation of a set of 12 radiographs in a three hour exam consisting of 40 multiple choice questions. Each candidate will have use of a densitometer and fluorescent light box in addition to the Reference Codes and Standards and other tools for convenience. Each test radiograph will be presented with a reader sheet giving details about the circumstances of the radiographic exposure. Candidates will be required to assess radiographic quality and indications for each test radiograph in accordance with one of three industry-accepted codes AWS D1.1, API1104, ASME Section V and VIII, ASME B31.1 and ASTM.

**Part C: CODE SPECIFIC** – This exam consists of 78 multiple choice questions that require the candidate to be knowledgeable with regards to the radiographic quality and film interpretation requirements of AWS D1.1, API1104, ASME Section V and VIII, ASME B31.1 and ASTM. Parts A and C of the CRI examination shall be given in a single three hour session and candidates will only have access to the Reference Codes and Standards to answer the questions.

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## Certified Welding Engineer

Each of the four examinations shall not have an individual score less than sixty percent: ..... 60%

Minimum weighted percentage for all 4 parts: ..... 70%

The CWEng examination is four parts. Parts 1 and 2 must be successfully completed in order to take Parts 3 and 4. The first two parts of the exam are closed book and cover basic science fundamentals and applied science fundamentals. Parts 1 and 2 are each two hour written multiple-choice exams (total time of four hours). They are given together and must be passed together. If the candidate fails only one part, only that part must be repeated.

Parts 3 and 4 of the exam are open book examinations on welding related disciplines and practical welding and related applications. They are each three hours in length. Part 3 is a 45 question essay exam. Part 4 is a 39 question multiple choice exam. Candidates who have successfully passed Parts 1 and 2, will be invited to sit for these exams. A separate application must be completed for these exams. The exams may be taken at any location where the CWI examinations are given. Candidates are invited to bring any textbooks, articles or codes in their library. Programmable calculators are allowed that do not have audible sounds. Laptops are also allowed, but no modem or wireless connections will be permitted.

The CWEng written examination subjects are listed in AWS B5.16, *Specification for the Qualification of Welding Engineers*.

**Note: D1.1 2006 edition is only applicable for CWEng codebook exam.**

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## Certified Robotic Arc Welding Operator & Technician

Examination:	Minimum number of questions
<b>Part A: CRAW FUNDAMENTALS</b>	136
<b>Part B: CRAW PRACTICAL</b>	30

Each of the two examinations shall not have an individual score less than 75%. The examination is two hours long. Part A exam consists of 136 multiple choice questions. The exam will be given in a closed book format. The Part B exam consists of 30 tasks are to be completed in sequential order. The CRAW written examination subjects are listed in AWS QC19, *Specification for AWS Certification of Robotic Arc Welding Personnel*.

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## Supplemental Inspection Endorsement (SIE) Examination

Examination	Minimum number of questions:	Minimum percentage:
<b>Part C: Code Book</b>	46-60	72%

Part C - See *Certified Welding Inspector and Associate Welding Inspector* instructions

## Non-Code Book Examination

Examination	Minimum number of questions:	Minimum percentage:
<b>Part C: Structural Bolting or Drawing Reading</b>	46-60	72%

Part C - See *Certified Welding Inspector and Associate Welding Inspector* instructions

For more information regarding study material for the Structural Bolting or Drawing Reading Endorsement exams, please visit our website at <http://www.aws.org/certification/endorsement/>.

## AWS Policies and Fees

<http://www.aws.org/certification/policiesfees/>