



SPECIALTY STRUCTURE CONTRACTORS GENERAL TRADE KNOWLEDGE EXAMINATION CONTENT INFORMATION

Revised September 14

The General Trade Knowledge portion of the examination is administered daily in Computer Based Testing (CBT) format. It will consist of 80 equally weighted questions.

The examination will have questions relating to the following content areas and necessary knowledge for each area includes:

- reading and interpreting plans and specifications
- reading and interpreting codes
- basic mathematics (addition, subtraction, multiplication, division, calculations of area and volume, fractions, decimals, percentages, calculating the sides of triangles, square roots, powers of numbers, and solving simple algebraic equations for unknown variables)

You should be prepared to respond to examination questions on any of the content areas listed. Questions asked and content areas tested on previous examinations should not be assumed to be the only possible questions to be asked or content areas to be tested on this examination.

The percentage of questions shown for each content area may vary by as much as plus or minus three (3) percent. Please refer to the Candidate Information Brochure and the Reference List for additional information.

Content Area A **7 ½%** **Foundations**

1. Excavating, laying out, forming and placing pier-type post footings

- knowledge of laying forms
- knowledge of measuring techniques
- knowledge of using a builder's level for grading
- knowledge of linear measuring
- knowledge of reinforcing materials
 - wire and rod
 - fiber
- knowledge of concrete mixtures
- knowledge of vapor barriers
- knowledge of compaction
- knowledge of grading

knowledge of cement finishing

- broom
- smooth

2. Placing CMU kneewalls

- knowledge of measuring techniques
- knowledge of using a builder's level for grading
- knowledge of linear measuring
- knowledge of reinforcing materials
 - wire and rod
- knowledge of mortar mixtures
- knowledge of placement of concrete block
- knowledge of thickness of joints

Content Area B **15%** **Wall Sections**

1. Fabricating and installing screen walls to support screen roofs

- knowledge of span tables
 - beam sizing
 - post spacing
- knowledge of fastening methods and placement
 - sizing
 - placement
 - anchoring methods for existing structures and slabs
- knowledge of friction and masonry anchors
 - sizing
 - placement
 - when to use
- knowledge of cutting equipment and techniques
- knowledge of measurement
- knowledge of materials compatibility
- knowledge of mesh density of screens
- knowledge of pitch requirements
- knowledge of wind load zones
- knowledge of caulking
- knowledge of where and how to install kickplates
- knowledge of corner cables and slant rigid bracing
- knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards
- knowledge of metal forming brakes safety
- knowledge of cutting equipment safety
- knowledge of various hand and power tools (e.g., power shears, wrenches, and snips)

2. Fabricating and installing screen walls to support metal roofs

knowledge of cutting equipment and techniques
knowledge of measurement
knowledge of materials compatibility
knowledge of mesh density of screens
knowledge of pitch requirements
knowledge of wind load zones
knowledge of caulking
knowledge of where and how to install kick plates
knowledge of corner cables and slant rigid bracing

3. Fabricating and installing framed solid walls (glass or metal) to support metal roofs

knowledge of span tables

- beam sizing
- post spacing

knowledge of fastening methods and placements

- sizing
- placement
- anchoring methods for existing structures or slabs

knowledge of friction and masonry anchors

- sizing
- placement
- when to use

knowledge of cutting equipment and techniques
knowledge of measurement
knowledge of materials compatibility
knowledge of mesh density of screens
knowledge of pitch requirements
knowledge of wind load zones
knowledge of caulking
knowledge of where and how to install kick plates

4. Fabricating and installing composite metal panel walls

knowledge of span tables

- beam sizing
- post spacing

knowledge of fastening methods and placements

- sizing
- placement
- anchoring methods for existing structures and slabs

knowledge of friction and masonry anchors

5. Fabricating and installing corner cables and rigid bracing

6. Tying new walls to existing structure

knowledge of caulking and sealing techniques and requirements

7. Fabricating and installing screen and storm doors

knowledge of measurement
knowledge of fastening methods and placements

- sizing
- placement
- anchoring methods for existing structures and slabs

knowledge of sealing techniques and requirements

8. Screen proper flashing to existing structures

knowledge of caulking and sealing techniques and requirements

**Content Area C
Roof Sections**

15%

1. Fabricating and installing standing seam and pan roofs

knowledge of structural spacing and support charts (*span tables*)
knowledge of fastening techniques and requirements
knowledge of caulking and sealing techniques and requirements
knowledge of flashing method and requirements
knowledge of wind load requirements
knowledge of roof attachment receivers

2. Fabricating and installing screen roofs

knowledge of structural spacing and support charts (*span tables*)
knowledge of fastening techniques and requirements
knowledge of wind load zones
knowledge of roof attachment
knowledge of roof types

- dome
- hip
- flat
- gable

knowledge of screen panel sizing
knowledge of gusseting
knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards

Content Area D

7 ½%

Insulation

1. Installing rigid insulation

knowledge of types of insulation

- urethane
- polystyrene

knowledge of covering protection of insulation

knowledge of thermal resistance (*R values*)

knowledge of caulking compatibility

2. Installing batt insulation

knowledge of thermal resistance (*R values*)

Content Area E Windows

15%

1. Installing and replacing vinyl windows in wood frame walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of wind load requirements

knowledge of linear measuring

2. Installing and replacing vinyl windows in masonry walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of wind load requirements

3. Installing and replacing vinyl windows in metal walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of wind load requirements

knowledge of strengthening walls for retrofitted windows (*glass not vinyl*)

knowledge of linear measuring

4. Installing and replacing glass windows in wood frame walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of linear measuring

5. Installing and replacing glass windows in masonry walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of wind load requirements

6. Installing and replacing glass windows in metal walls

knowledge of fastening techniques and requirements

knowledge of sealing techniques and requirements

knowledge of wind load requirements

knowledge of strengthening walls for retrofitted windows (*glass not vinyl*)

knowledge of linear measuring

Content Area F Post and Beam Structures

15%

1. Installing post and beam structures under wood roofs

knowledge of fastening techniques and requirements

knowledge of anchoring techniques and requirements

knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards

knowledge of carport assembly requirements and techniques

knowledge of patio assembly requirements and techniques

2. Installing post and beam structures under metal roofs

knowledge of fastening techniques and requirements

knowledge of anchoring techniques and requirements

knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards

knowledge of carport assembly requirements and techniques

knowledge of patio assembly requirements and techniques

Content Area G
Roofovers

15%

- 1. Installing raised metal standing seam roofovers**
knowledge of fastening techniques and requirements
knowledge of sealing techniques and requirements
knowledge of insulation techniques and requirements
knowledge of caulking and sealing techniques and requirements
knowledge of structural spacing and support tables (*span tables*)
knowledge of venting techniques and requirements
knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards
knowledge of metal forming breaks safety
knowledge cutting equipment safety
knowledge of various hand and power tools
(*e.g., power shears, wrenches, and snips*)
- 2. Installing flat down metal standing seam roofovers**
knowledge of fastening techniques and requirements
knowledge of sealing techniques and requirements
knowledge of insulation techniques and requirements
knowledge of caulking and sealing techniques and requirements
knowledge of structural spacing and support tables (*span tables*)
knowledge of venting techniques and requirements
- 3. Installing raised metal laminated roofovers**
- 4. Installing flat down metal laminated roofovers**
- 5. Installing raised vinyl blanket roofovers**
- 6. Installing flat down vinyl blanket roofovers**

Content Area H

Siding, Soffit, Fascias, Gutters and Downspouts

10%

- 1. Installing rectangular gutters**
knowledge of fastening techniques and requirements
knowledge of sealing techniques and requirements
knowledge of spacing
knowledge of sizing gutters and downspouts
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction
knowledge of preparation for fastening
- 2. Installing seamless gutters**
knowledge of fastening techniques and requirements
knowledge of sealing techniques and requirements
knowledge of spacing
knowledge of sizing gutters and downspouts
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction
knowledge of preparation for fastening
- 3. Installing water diverters**
knowledge of fastening techniques and requirements
knowledge of sealing techniques and requirements
knowledge of caulking and sealing techniques and requirements
knowledge of sizing gutters and downspouts
knowledge of nailing requirements and spacing
- 4. Installing lap type gutter expansion joints**
- 5. Installing butt type gutter expansion joints**
- 6. Installing gutter accessories (e. g., baffles, screens, strainers)**
knowledge of fastening techniques and requirements and overlapping
knowledge of sizing gutters and downspouts
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction

7. Installing downspouts

knowledge of fastening techniques and requirements and overlapping
knowledge of sizing gutters and downspouts
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction

8. Installing miters

9. Installing starter strips

knowledge of fastening techniques and requirements and overlapping
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction
knowledge of application of weatherproofing
knowledge of insulation techniques and requirements
knowledge of preparation for fastening

10. Installing soffit, roof and gable vents

knowledge of fastening techniques and requirements and overlapping
knowledge of sizing vents
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction
knowledge of application of weatherproofing
knowledge of backer boards
knowledge of spacing of vinyl
knowledge of fastening into cement
knowledge of preparation for fastening

11. Removing and replacing wood sheathing

knowledge of fasteners to be used depending on thickness of sheathing

12. Installing aluminum, vinyl, and other siding

knowledge of fastening techniques and requirements and overlapping
knowledge of nailing requirements and spacing
knowledge of spacing for expansion and contraction
knowledge of application of weatherproofing
knowledge of backer boards
knowledge of preparation for fastening
knowledge of safety requirements for ladders, scaffolds, rolling platforms, and walk boards
knowledge of metal forming brakes safety
knowledge of cutting equipment safety
knowledge of various hand and power tools
(*e.g., power shears, wrenches, and snips*)

13. Installing vapor barriers

14. Installing downspout hangers

15. Installing furring strips

knowledge of fastening techniques and requirements
knowledge of insulation techniques and requirements
knowledge of caulking and sealing techniques and requirements
knowledge of nailing requirements and spacing
knowledge of application of weatherproofing
knowledge of preparation for fastening
knowledge of spacing for horizontal and vertical siding
knowledge of most commonly used furring strips over brick or masonry

16. Constructing and installing splash pans