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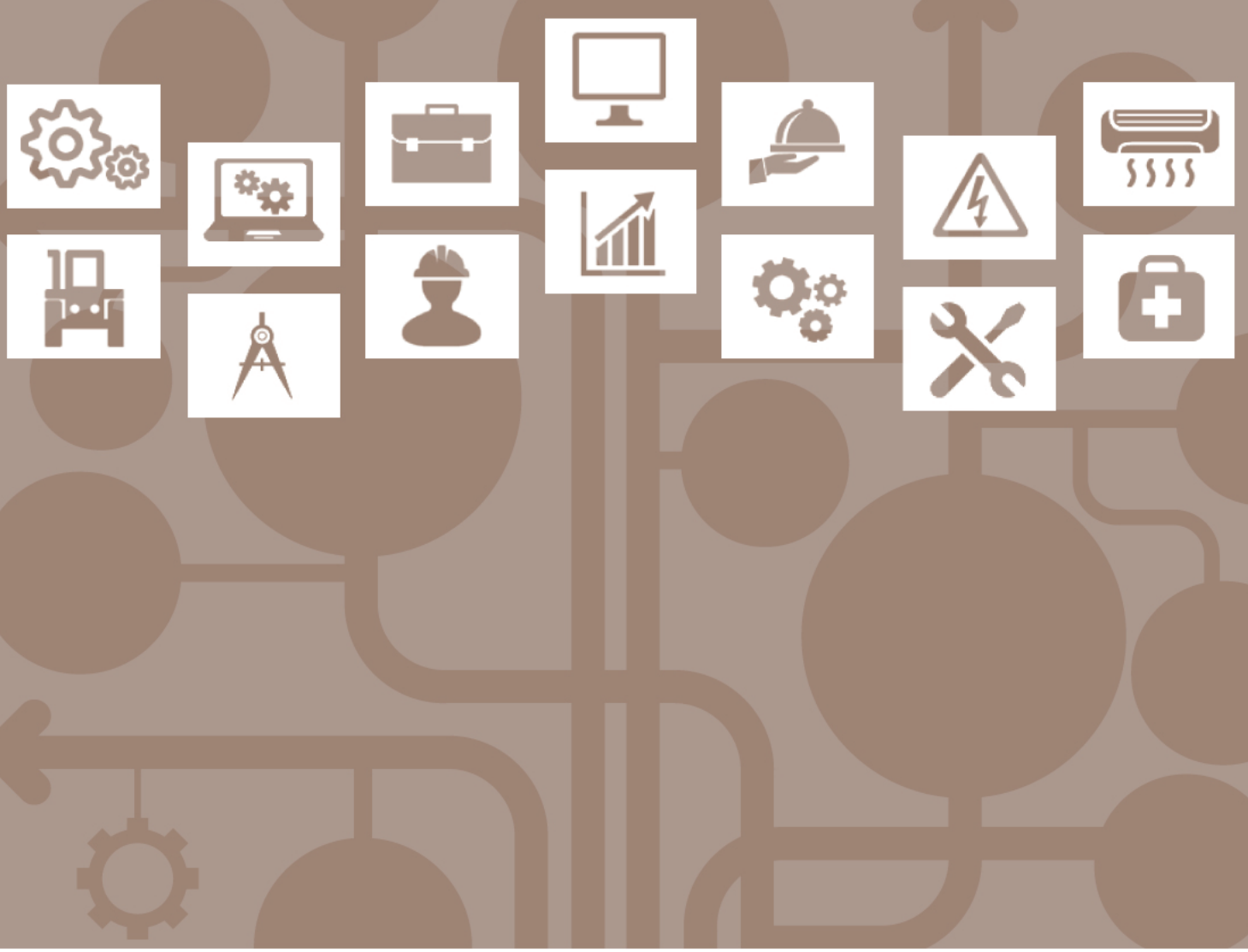
Entry Level Assessment Blueprint

CAD Foundations



Test Code: 1090 / Version: 01

Specific Competencies and Skills Tested in this Assessment:

Basic CAD Principles

- Describe objects as geometric entities
- Describe and demonstrate the process of using a mechanical or electronic caliper accurately
- Describe and demonstrate the use of graphic communication skills through sketching
- Express a design of an object as a 3-D model
- Export and import images/files in a variety of file formats
- Evaluate the choice and placement of dimensions, notes, and annotations to clearly communicate all information
- Revise a design and update finished drawings appropriately
- Identify basic geometric elements
- Describe and apply basic geometric concepts to building 3-D models

Hardware and Operating Systems

- Define and apply computer terminology
- View file names on a storage device
- Store, copy, move, and retrieve information to/from various drives
- Rename and back up files

Drafting Conventions

- Interpret basic views and dimensions in a working drawing
- Identify geometric tolerance symbols
- Interpret drawing symbols

Specific Competencies and Skills continued

Drafting

- Explain the Cartesian Coordinate System
- Describe the process for setting and editing drawing elements
- Create and edit line types
- Create and edit basic geometries
- Place and edit text and fonts
- Create orthographic, isometric, section, and auxiliary views
- Place and edit dimensions
- Generate a 2-D multiview drawing
- Generate a pictorial drawing
- Scale and print a hard copy, or save as a .PDF, to an output device
- Explain the use and need for scaled drawings

Modeling

- Create and edit construction planes through reference geometry
- Create a 2-D drawing from a 3-D model
- Create a 3-D model from a 2-D drawing

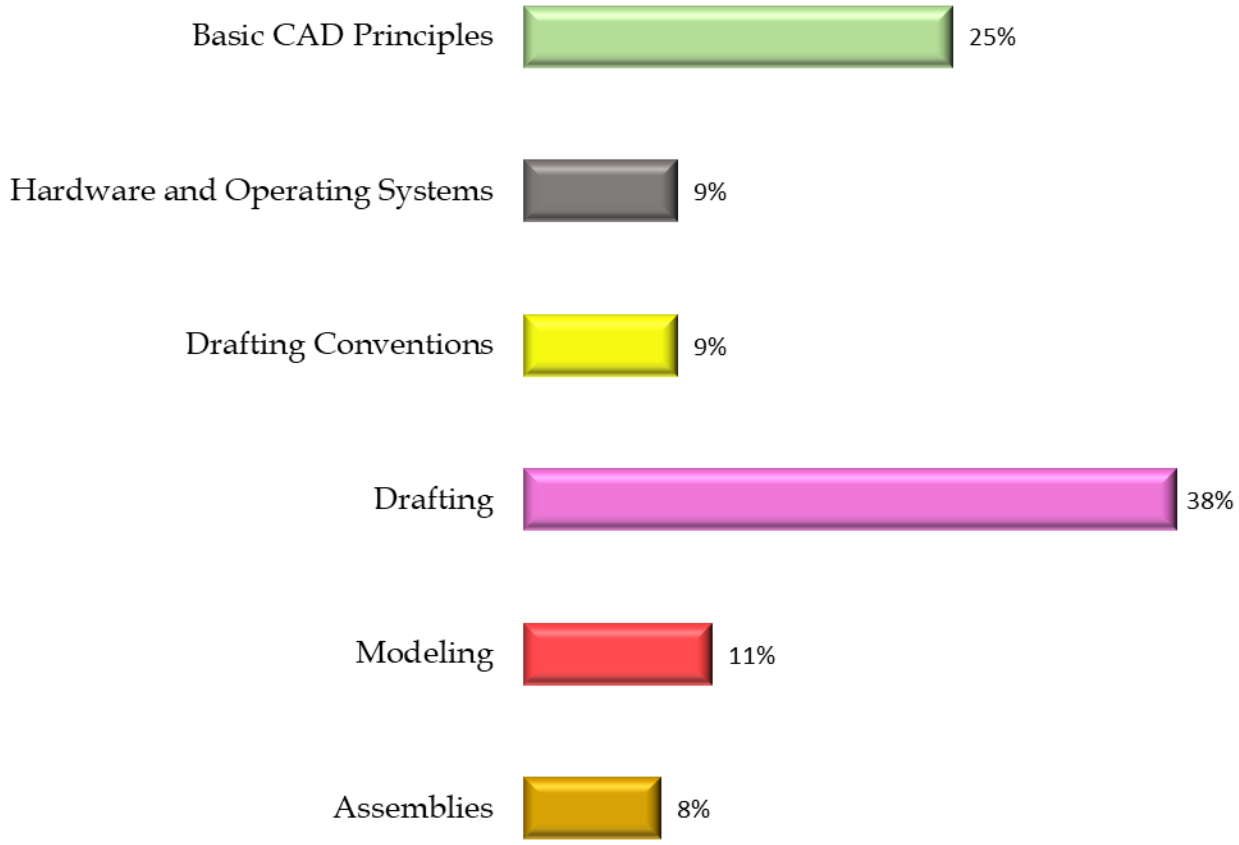
Assemblies

- Create an assembly in 3-D geometry
- Create an exploded view of a 3-D assembly

Written Assessment:

Administration Time: 2 hours
Number of Questions: 90

Areas Covered:



Sample Questions:

A three dimensional model of a cylinder could be created by extruding a

A. square
B. triangle
C. circle
D. hexagon

The acronym, CPU, stands for

A. computer projection unit
B. concentric point verification
C. central processing unit
D. computer power user

The amount that a dimension may vary is called

A. leeway
B. clearance
C. tolerance
D. variability

Hidden lines in a sectional assembly view are

A. displayed as a solid line
B. typically not shown
C. shown as phantom lines
D. mandatory

The generation of a 2-D drawing from a 3-D model requires

A. a valid 3-D model
B. preset view ports
C. a valid isometric view
D. preset line types and layers

